GOVERNMENTAL PURCHASING

RUSSELL FORBES

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GOVERNMENTAL PURCHASING

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BY

RUSSELL FORBES

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TO
HOWARD R. HEYDON

IN APPRECIATION OF HIS
FORESIGHT AND ENCOURAGEMENT

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PREFACE

From the very beginning of our political history, the letting of contracts for *matériel* has been one of the bulwarks of the spoilsman. "Some of the greatest scandals unearthed in American politics," says Dr. Charles A. Beard, "have grown out of the corrupt use of money in buying goods and letting contracts." To insure honesty in the expenditure of public funds, federal, state, and local governments have set up an elaborate code of legal restrictions requiring open and competitive bidding, the award of the order or contract to the lowest and best bidder, and prescribing in detail the procedure to be followed in public purchasing. Such restrictions, although seemingly necessary to safeguard the public interest, have so hedged in the public buyer that, wherever he turns, he is confronted by a legal "check and balance." Consequently, governmental purchasing, in comparison with the purchasing systems of private corporations, very frequently seems slow, cumbersome, and replete with "red tape." But despite legal restrictions, the purchasing systems in several governments of the United States and Canada have achieved a plane of efficiency which suffers little from comparison with the best modern practice in private business.

The methods followed in the procurement of supplies, materials, and equipment were never more essential to economy in government than they are today. As the functions and activities of government have expanded in every direction, the expenditure of public funds for *matériel* has mounted at an astonishing rate. The average government today spends from 20 to 30 per cent of its current operating budget for material goods. A quarter-century's experience has demonstrated that the centralized method of purchasing, granted even a reasonable freedom from political

interference, can reduce the unit cost of commodities from 10 to 15 per cent, and can be the means for reducing the aggregate expenditure, or for increasing the mileage of the tax dollar which goes for *matériel*, by that amount. Obviously, then, centralized purchasing must be given serious consideration in any plan for "business" administration of government.

This volume represents a five-year study of the functioning of purchasing systems in the federal, state, county, and municipal governments of the United States and Canada, and a concurrent experience in drafting laws and helping to install new procurement methods in purchasing offices. No attempt has been made to recommend a "model" purchasing system or to devise "model" forms for its administration, because the widely varying legal requirements and local conditions demand peculiar modifications and precise adjustments in the individual government. Instead, the writer has attempted to present a synthesis of the best existing practice, illustrated by representative forms in actual use, of each of the various steps of the purchasing system in which the purchasing office plays a rôle, from the receipt of a requisition or an estimate of requirements from the using agency, to the approval of the claim for payment. It is hoped that these principles and forms can be applied, *mutatis mutandis*, in the establishment of a new purchasing system, or in the refinement of the existing system, in any government. As a further assistance to the practical application of centralized purchasing, the writer has compiled a representative set of laws, examination questions for the selection of a purchasing staff, salary standards, and other data which are presented in the appendices.

The field work upon which this study is based was carried on by the writer while he was serving as assistant secretary in charge of research for the National Association of Purchasing Agents. I am, therefore, greatly indebted to the officers of that association who made the study possible, and to the hundreds of government officials who cooperated to the fullest by interpreting their methods and making available the records of their success or failure. Above all, I am indebted to A. E. Buck, of the

National Institute of Public Administration, who has been my mentor and my anchor to windward throughout all the strenuous period of study and composition. Professor Howard Lee McBain, of Columbia University, has also been consistently helpful and has made many valuable suggestions. I am especially obligated also to the following authorities who studied the manuscript in its original form and offered many helpful criticisms: A. G. Thomas, associate chief investigator of the United States Bureau of Efficiency; L. F. Boffey, editor of *The Purchasing Agent;* Walter N. Kirkman, state purchasing agent of Maryland; and Joseph W. Nicholson, city purchasing agent of Milwaukee. My statements on the work of the federal government of the United States in the field of standardization have been carefully checked by Dr. A. S. McAllister, chief of the division of specifications of the Bureau of Standards. William Watson, of the National Institute of Public Administration, has checked the chapters on storage and stock control and accounting control over purchases. Dr. Luther Gulick, director of the National Institute of Public Administration, has read this book in galley proof and has offered many constructive criticisms. For assistance in digesting the laws on purchasing in several states, I gratefully acknowledge my indebtedness to Dr. Wylie Kilpatrick, sometime fellow-staff-member in the office of the National Association of Purchasing Agents and now associate research professor of government in the University of Virginia. The manuscript has been piloted through the various stages of typing and proofreading by Miss Esther Crandall and Miss Eleanore Busching, of the Municipal Administration Service, and Miss Helen L. Watts, of the *National Municipal Review.*

No book of this kind can be written without putting severe strains upon the family ties. In conclusion, therefore, I acknowledge my appreciation to my wife, Dr. Grace Springer Forbes, who generously shared with me the travails of authorship.

RUSSELL FORBES

New York City
March, 1929

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GOVERNMENTAL PURCHASING

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CHAPTER I

GENERAL ASPECTS OF CENTRALIZED PURCHASING

THE delegation, to one office, of the authority to buy the supplies, materials, and equipment needed by all the operating branches of an organization is known as centralized purchasing. This is in contrast to decentralized purchasing in which each operating branch buys *matériel* for its own use. In private corporations, the central purchasing agency furnishes the raw materials which enter into the manufacture of the finished products, the equipment used in the factory and in the administrative offices, and the miscellaneous supplies required in every phase of the business, including marketing and distribution. In public corporations, the function of the central purchasing office is to buy the supplies, materials, and equipment used in all departments for the production of governmental services.

The Evolution of Centralized Purchasing.—Centralized purchasing is a comparatively recent development in America, both in private and in public business. It was devised to meet increased competition by reducing production costs. As long as our industrial and commercial world was made up principally of "one-man" organizations, the commodity requirements were bought by the proprietor or owner, or by an individual acting under the proprietor's immediate supervision. With our industrial expansion, the "one-man" business was superseded by fewer

and larger corporations, with branch offices, factories, and distributing points. At first each branch bought what it needed to maintain its own business. Meanwhile sales methods were improved to cope with increasing competition, and advertising methods were evolved to assist in the marketing process. But since labor costs continued to increase, it became evident that something was needed besides supersalesmanship to market the products at a profit. Producers and distributors had found that the net profit could be increased through reduction of the unit price for large orders. The next logical step, then, was to centralize purchasing so that the requirements of all branches could be pooled and the competition of one branch against another in buying the same articles in the same market could be eliminated, with not only a reduction in unit price, but with a concomitant reduction in overhead buying cost. Today the large commercial and industrial corporation which still permits each branch to buy without some form of central supervision is almost unheard of. Purchasing is coordinate with production and sales as a factor in the profit of doing business. Indeed, the cost of materials is now known to be the most important factor in determining the margin of profit, for it has been found by the United States Census Bureau that out of every dollar received for the sale of his product the average manufacturer has spent fifty-seven cents for materials.[1] Efficient purchasing is obviously the foundation upon which all profit-making must rest, especially in highly competitive industries.

Buying methods in government have passed through somewhat the same evolution. Government, too, started out as a "one-man" business. Almost the sole function of the pioneer government was protection of life and property. Its commodity needs were few and simple. But government has now become a public-service institution. Education, care of the indigent, medical service, and business and housing regulations, formerly carried on by private funds, are now accepted without question as typical governmental functions and are usually financed, at

[1] Gushée and Boffey, *Scientific Purchasing*, p. 5.

least in part, from the public treasury.[2] "Such expansion of service has created a dependence of the public upon government, and has so increased its cost that it has become essential that governmental activities be well and economically performed. If they are not, the comfort, property, and even life, of citizens are jeopardized, and financial burdens are created which are exceedingly difficult to bear." [3]

The extensiveness of the present-day problem of the state in providing institutional care and support is well illustrated by the following statistics from Massachusetts: "The state feeds, clothes, provides lodging, instruction and religion for approximately 29,000 people. It maintains forty-four important institutions—fifteen hospitals for the mentally ill; four for tubercular patients; one general infirmary; one hospital for crippled children; four prisons and reformatories; one state farm; three reform schools; besides ten normal schools, three textile schools, the Nautical Training School, and an agricultural college with a registration of about 800 students. The state operates thirty farms with 3,000 cows and 2,500 hogs. It manufactures shoes, office furniture, metal ware, clothing, mattresses, underwear, brooms, brushes, automobile plates and numerous other items." [4] The products of the state's farms supply a portion of the state's food requirements, and the products of the prison factories are used wherever possible in public work. In addition, however, the state is compelled to buy huge quantities of commodities, as shown by the following partial list of some of the state's leading purchases: "The purchasing bureau, during 1924, bought 1,614,000 pounds of beef, 31,000 barrels of flour, 285,000 pounds of coffee and tea, 258 tons of soap, 60 tons of cheese, 1,300,000 gallons of road oil, 60 tons of white lead, 15,000 gallons of linseed oil and turpentine,

[2] When Detroit was incorporated in 1824, the city government had 11 elementary functions; in 1920 it had 184 functions. This is typical of the expansion in all governments during the nineteenth and twentieth centuries. See "The Growth of a City," by the Detroit Bureau of Governmental Research, *Public Business* No. 70, June 1, 1922.

[3] Upson, *Practice of Municipal Administration*, p. 3.

[4] *First Annual Report of the Commission on Administration and Finance of Massachusetts*, p. 7.

$45,000 worth of fertilizer, 5,500,000 envelopes and 2,500,000 letterheads." [5]

With the growth of government into a huge business, not only have the volume and diversity of its institutional "shopping list" mounted at an astonishing rate, but in every phase of its activity varied commodities are required for the production of service to the citizens. These commodities are secured only in exchange for public funds. General H. M. Lord, director of the budget, has estimated that the federal government of the United States spends over a quarter-billion dollars per year for the *matériel* needed to maintain its varied activities. Another authority claims that our states and cities pay out over $700,000,000 per year for such supplies, materials and equipment.[6] For these items New York City alone spends nearly $50,000,000 per year. Indeed, these expenditures in the average government consume from 20 to 30 per cent of the current operating budget. It is obvious that the methods of spending such huge amounts have an important bearing on efficient production in public as well as in private business. Experience has demonstrated beyond a doubt that by centralized purchasing the unit cost of supplies, materials, and equipment can be reduced, on an average, from 10 to 15 per cent—a saving which speaks for itself.

The Advantages of Centralized Purchasing.—Under the decentralized plan of buying, each using branch of the government bought its own supplies, materials, and equipment. If the government branch was large, with detailed supply requirements, it often maintained its own purchasing staff. If it had very limited supply needs, one individual was frequently assigned to buy, in connection with his regular tasks. Such individual, although an expert in his regular work, was often unfitted for buying and only slightly interested in it. He did not have time to study market trends; his orders were too small to attract wide competition among vendors; the government frequently, therefore, paid retail

[5] *Second Annual Report of the Commission on Administration and Finance of Massachusetts*, p. 11.

[6] E. Stagg Whitin, *The Annals of the American Academy of Political and Social Science*, May, 1924, p. 131.

prices on its purchases. The apparent inefficiency of these methods, however, was sometimes justified, for many departmental buyers did their work well, and the government would have been practising false economy if, on many small orders, it had followed up-to-date buying methods. The overhead cost of advertising for bids and securing favorable prices alone would have been greater than the potential saving.

But while the buyer in one department was purchasing a certain article, other departmental buyers were often purchasing the same article at the same time. This duplication of work was wasteful and extravagant. Furthermore, the various branches of the government were competing against one another in the same market. By placing many small orders, the government frequently paid retail prices on each; whereas, by pooling its requirements in fewer, larger orders, the government could, through centralized purchasing, have secured lower unit prices and effected substantial savings, although buying the same total quantities. The Tax Association of Alameda County, California, showed by a survey a few years ago that 64 county agencies were then buying independently. A certain grade of paper was being purchased from a certain vendor by one county agency for $6.45 per case; from the same vendor by another agency for $7 per case; and by still another agency from the same vendor for $7.50 per case. At the same time, this vendor was supplying commercial buyers with the same grade of paper in 25-case lots for $5.50 per case.[7]

The Toronto Bureau of Municipal Research in 1921 showed that the different departments of that city were buying the same articles at the same time at prices which varied from 50 to over 100 per cent.[8]

Newspaper reports on the 1928 sewer scandal in the Borough of Queens showed that the several boroughs of New York City paid various prices, ranging from the established market price to ten times that amount, for the same kind and quality of sewer pipe at the same time from the same supplier.

[7] *Report No. 13,* June, 1914.

[8] *White Paper No. 49,* November 17, 1921.

The results of competition between departments of the federal government was also strikingly shown during the World War. Upon our entrance into the war, the several branches of the government, particularly the War and Navy departments, entered the market on a large scale in anticipation of their needs. Their demands sometimes exceeded the available supply. The services bid against one another and ran the price up unreasonably. The service most needing the articles did not always get them. Often one service could not secure a needed article, while another branch had a supply in excess of its requirements.

This was graphically pointed out by ex-Secretary of War Baker in an address on "Some Legal Phases of the War" before the Cleveland Bar Association on March 29, 1921: "I went down into the basement of the War Department one day and could not get through the corridors of that vast building because they were piled to the ceiling with typewriters. I asked, 'Whose are those?', and was told that they belonged to the adjutant general. I went to the adjutant general and asked him why he had bought so many typewriters, and how many he had bought, and he replied, 'I bought every available typewriter in the United States.' I then asked him why he bought them all, and he replied, 'If I had not bought them, the surgeon general would have; or, if the surgeon general had not bought them, the Navy Department would have got them or the Treasury Department.'"

In all such instances, which could be multiplied almost indefinitely, the government penalized itself financially for the lack of centralized buying control. Had all the requirements of the various using branches been combined into a single order or contract, the unit price could have been reduced to the level of the price to large-lot commercial buyers, or to the level of the lowest price paid by any individual government department. The potential saving is obvious.

When purchasing is centralized in one office, the total number of orders and contracts entered into by the government should be greatly reduced. There follows a reduction in the overhead cost to both the buyer and the seller. The fewer the orders, the

less is the work of checking and accounting for expenditures and of inspecting and testing deliveries. Furthermore, when the government becomes a "big buyer" through centralized purchasing, the service of the vendor in making prompt and satisfactory deliveries is likely to be considerably improved, since he, too, profits through a reduction in his sales costs and accounting costs in soliciting business from, and keeping accounts with, only one office instead of several. In fact, the government can often purchase large lots direct from the producer, thus eliminating the profits of the middlemen.

When the duplication of departmental buying is eliminated, the total number of persons engaged in buying can be greatly reduced. The central purchasing office in the state of Washington took over the work of between 40 and 50 buyers in the various departments and institutions, and operated with a staff of 8, consisting of the purchasing agent, 3 buyers, 3 stenographers, and a file clerk. The situation in New York City in 1913 was described as follows: "There are under the government of the City of New York one hundred and twenty different departments, bureaus, boards, commissions, and offices in the various heads of which is vested the power to purchase supplies. When the new municipal building in Park Row is fully occupied there will be, under one roof, no less than forty-eight city purchasing agents, or two on each occupied floor of the building, each buying practically the same lines of supplies." [9]

A much smaller staff, working full time, can handle the total purchases because the number of orders and contracts to be issued should be materially lessened. When purchasing is established as a separate and distinct function, the volume of work in most governments justifies the employment of a full-time purchasing agent and a buying staff. Full-time employment in purchasing cannot fail to lead to increased efficiency on the part of the entire staff. Most large purchasing offices employ buyers, each of whom

[9] *Report Submitting Plan of Proposed System for the Central Purchase and Distribution of Supplies for the City of New York,* by William A. Prendergast, Comptroller, March, 15, 1913, p. 9.

is a specialist in a given commodity line. He becomes thoroughly acquainted with the sources of supply, with fluctuations in market prices, and with the quality required by the different using branches. Purchasing is thus professionalized. It was formerly thought that anyone could buy; it is now generally conceded that purchasing requires training and experience for satisfactory results.

When purchasing is decentralized, each using branch buys the particular grade, quality, or size of commodity which it prefers. For example, several kinds of cleaning material may be purchased for the performance of the same function, and at a variety of prices. It is reasonable, however, to assume that the cleaning material suitable for use on the floors of the police or fire stations will serve equally well in the city hall or state capitol. This likewise holds true for numerous commodities which are common to the needs of all using branches.

Centralized purchasing should therefore employ standardization in reducing the variety of commodities used by the government. If each using branch is permitted to requisition and to receive the particular brand which it prefers, centralized purchasing will result only in the placing of the same number of orders as formerly, but through a central office. Bulk orders, representing the aggregate needs of the government, are made possible only through the establishment of standards. The standard should represent as closely as possible the quality, grade, or size best adapted to general use. A centralized purchasing system should provide the authority to establish standards, preferably by the purchasing agent, in cooperation with the heads of the department concerned and with the mayor, manager, governor, or other chief administrative official.[10] Although standardization is an essential part of a successful purchasing plan, it is generally the chief basis for opposition by using officials. Many department heads wish to order the precise article of their choice, regardless of the

[10] The various existing plans for standardization, and the preparation of specifications for describing the standards, are set forth in Chapter V.

potential saving through the establishment of standards which can be used generally by the organization.

Centralized purchasing should also result in centralized supervision over deliveries and stocks on hand. Under the decentralized plan of buying, each department usually inspects the goods which it receives. This means a diversity of inspection methods, which may be the source of considerable loss. All deliveries can be inspected by a uniform method and by trained inspectors under the supervision of the purchasing agent or the comptroller, especially in cities where the using branches are in close proximity to each other. Furthermore, when centralized control is lacking, each department usually maintains its own stock on hand in anticipation of need, which may result in an unnecessarily large investment.

Centralized stock control is not yet as common in purchasing systems as it should be, but the present trend is in that direction. One using department often has a surplus stock of a certain article which is needed for use by another department. Without centralized control, the government may enter into many unnecessary orders, involving needless expenditure of public funds. Responsibility for transfer of commodities from one department to another, and for the sale of obsolete and useless stock, should be centralized in the purchasing office.

Centralized purchasing also facilitates closer accounting control over expenditures. With proper teamwork between the purchasing and accounting officials overexpenditure of appropriations can be avoided, invoices can be more speedily and more accurately checked, and payment can be made promptly so that invoice prices can be discounted.[11]

Summary of Advantages.—The detailed advantages of centralized purchasing are demonstrated in connection with the discussion of purchasing procedure in subsequent chapters. Briefly summarized, these advantages are:

[11] The advantages of, and the means for fiscal control over expenditures are fully discussed in Chapter XI.

1. Reduction in overhead cost through reduction in personnel.
2. Lower unit costs and better delivery service.
3. Reduction in the volume of "paper work."
4. Standardization and the adoption of standard specifications.
5. Centralized supervision over:
   (a) Inspection of deliveries;
   (b) Storage and distribution of stock; and
   (c) Interdepartmental transfers and sales of surplus stock.
6. Closer accounting control over expenditures.
7. Saving of discounts through prompt payment of invoices.
8. Employment of a full-time purchasing staff:
   (a) Improves buying technique; and
   (b) Tends to eliminate graft and favoritism.
9. Simplification of the vendor's problem through:
   (a) Solicitation of business from one purchasing office;
   (b) Reduction in the number of orders and deliveries; and
   (c) Reduction in account-keeping with the government.

The Disadvantages of Centralized Purchasing.—Unless properly administered, a system of centralized purchasing may involve certain disadvantages. The charge is often made that the purchasing office does not comprehend the needs of the using agencies and arbitrarily supplies unsatisfactory quality. This defect, however, can be remedied by a proper program of standardization in which the qualities specified are adaptable to general use. Then, too, many complaints are made against the delay in securing deliveries through the central office. This charge may be well founded if the purchasing system is cumbersome and inflexible. Most systems, however, provide for waiving of the detailed procedure in cases of genuine emergency; in all such cases, the purchasing office should be able to secure delivery as quickly as, if not more quickly than, any individual using department, if it has established the proper contact with supply sources, and has arranged contracts on which to secure prompt delivery. The work of the purchasing office should also be so arranged as to distribute the peak load, thus avoiding delays in filling requisitions at certain periods. In some cases, too, purchasing officials have yielded to the temptation to buy "bargains" which proved to be poor

investments, or have purchased larger stocks than necessary. But all such arguments are indictments of the administration of centralized purchasing rather than indictments of the plan itself.

Summary of Disadvantages.—Briefly summarized, the disadvantages of centralized purchasing are:

1. The purchase of quality unsuited to the requirements of the using agencies.
2. Delay in securing deliveries.
3. Securing larger stocks than necessary through "bargain" purchases.

Purchasing a "Staff" Functon.—Purchasing, in the modern sense, is more than the mere procurement of supplies, materials, and equipment. It involves responsibility not only for buying, but for inspecting, storing, and distributing the commodities needed by the government. Purchasing should be the left hand of budget control. In the central purchasing office, the fiscal officer should find his chief aid in keeping expenditures for commodities within the appropriation limits, in hastening the approval of bills to take advantage of discounts, and in securing a dollar's worth of value for every hundred cents expended.

Like fiscal control and the selection and management of personnel, purchasing is a "staff" function. It is not an end in itself, for supplies, materials, and equipment are not purchased for the sake of spending money, but to enable the "line" departments—fire, police, health, etc.—to render their service to the citizens. The civil service commission, the finance department, the legal department, and the purchasing office, among others, do not come into direct contact with the citizens, but are established to relieve the line departments of work which is not directly connected with their primary functions. As an ancillary officer, the purchasing agent's sole concern should be to assist the heads of the line departments. By stretching the appropriation dollar to the limit of its buying power, the purchasing office thus enables the line departments to perform more service without increasing their operating budgets.[12]

[12] The distinction between staff and line functions is clearly and fully discussed in Anderson, *American City Government*, pp. 432-441.

Savings through Centralized Purchasing.—The total amount saved through centralized purchasing in government is difficult to determine with exactness. Public corporations, unlike private corporations, have no marketable products. It is impossible, therefore, to gauge the ratio between the total production cost and the cost of *matériel*. The most satisfactory method for computing savings is to compare the prices paid through the central purchasing office with the prices paid for the same commodities by the various using branches when buying independently. Such comparison is best made during the first year of centralized purchasing when comparative figures are easily available. Fluctuations in market prices must of course be considered. On the other hand, a purchasing office usually saves more in subsequent years than in the first year of its operation, for its effectiveness increases after it has established its contacts with sources of supply and has set up its necessary office records.

A central purchasing department was established in Pittsburgh, Pennsylvania, in 1910. Table I shows the savings made during the first year of centralized buying on representative commodities selected from a list of 187 items.[13] Market prices remained relatively stable. But conceding some fluctuation in market conditions, the price differences are great enough to reflect credit upon the increased effectiveness of the buying methods. It is to be noted that the specific brand, trade name, or size is given in most cases to make the comparison more authoritative. The saving cannot, therefore, be ascribed to purchase of inferior quality.

Centralized purchasing was adopted in Dayton, Ohio, in 1914 when the city manager plan became effective. The various using agencies of the city had been paying from $12 to $22 per thousand for letterheads. Standardization upon one grade and quality of paper, and buying it in bulk, reduced the price of letterheads to $2.70 per thousand in the first year of centralized purchasing. Some other typical savings are shown in Table II.[14]

[13] The differences in prices for the entire list of 187 articles are shown in Appendix A.

[14] Quoted from Rightor, *City Manager in Dayton*, p. 195.

TABLE I

Savings Through Centralized Purchasing, Pittsburgh, Pa.

Article	*Price, Centralized Purchasing 1910*	*Price, Decentralized Purchasing 1909*
Axes	$ 4.90 doz.	$ 8.50 doz.
Batteries, dry cells (Columbia)	.18 each	.19 to .45 each
Building bricks	6.25 M	7.95 M
Stable blankets	24.00 doz.	45.00 doz.
Paper roofing, 2-ply	.43 roll	.65 roll
Electric fans, Emerson 15-inch	15.75 each	27.50 each
Dietz lanterns, No. 2	4.25 doz.	6.00 doz.
Castor oil	1.00 gal.	2.00 gal.
Neatsfoot oil	.56 gal.	1.25 gal.
Underwood typewriters No. 5	92.50 each	99.00 each
Cascara compound tubes (Wyeth Bros.) 5-grain	1.18 M	2.00 M
Jenkins globe valves 2-inch	1.44 each	2.39 each

TABLE II

Savings Through Centralized Purchasing, Dayton, Ohio

Article	*Price, Centralized Purchasing 1914*	*Price, Decentralized Purchasing 1913 and Earlier*
Floor oil	$ .12 gal.	$1.25 gal.
Typewriter ribbons	.25 each	.75 each
Carbon paper	.65 per 100 sheets	3.00 to $4.00 per 100 sheets
Paper clips	.23 M.	.80 to $1.20 M.
Flash lights	.95 each	2.50 each
Manila second sheets	.28 M.	1.00 to $1.10 M.
Cup grease	.035 lb., in barrels	.10 lb., in 10-lb. cans
		.08 lb., in 25-lb. cans
Rubber bands	1.26 lb., in wholesale lots	4.00 lb., in ¼- or ½-lb. lots
Rough soap	4.50 M lbs., in wholesale lots	8.75 M lbs., in ½-barrel lots

The cost of standard fire hose was reduced 50 per cent; coal, 40 per cent. In the first year of centralized purchasing, according to Rightor, Dayton saved $83,000, with due allowance for price fluctuation.

In 1924 the purchasing agent of Dayton installed storage tanks so that gasoline could be purchased in tank-car lots for distribution as needed from the municipally operated service and filling station. Gasoline was bought by the city in 1924 in tank-cars at an average price of slightly over 11 cents per gallon. The average price of the same gasoline during the same period by wagon delivery was 17 cents per gallon. The saving to the city in one year by this method of purchasing and distributing gasoline amounted to more than the salaries of the entire staff of the purchasing department.

In 1918, the first year of its operation, the purchasing department of Indianapolis saved the city over $50,000. The board of public works had bought a steam roller for $2,750 just before the purchasing department was created. The purchasing department bought another steam roller of exactly the same make and style for $2,303.60, a difference of $446.40. Carbon paper dropped from $3.50 to $2.25 per box, green paint from $2 to $1.10 per gallon, gravel from 61 cents to 56 cents per ton, cement from $1.84 to $1.74 per barrel, and typewriter ribbons from $7.50 and $9 per dozen to $5 per dozen.

A bureau of supplies was established in July, 1923, for the city and county of San Francisco. In the first two months of its operation, this central buying agency saved over $50,000. This saving was made in the most trying time of all, when the purchasing agency was just getting under way, and when some departments of the government were opposing its progress and placing many obstacles in its path. Cost of pillows for the city institutions was reduced from $2 to $1.05 each by buying in the open market after all sealed bids had been rejected. On coal for the city school system, the purchasing department secured a price of $1 per ton lower than the school board could secure on the same quantity and quality. By buying in the open market after

rejecting bids, the price of sugar was reduced from $9.74 to $7.57 per hundred pounds. This meant a saving to the city and county of between $500 and $600. By buying picks for use in the street department in quantity, the price per dozen was reduced from $12 to $5. On an order for thirty dozen picks the city saved $225. By rejecting bids for cement at $3.01 per barrel, the bureau of supplies bought it in the open market for $2.71 per barrel, saving 10 per cent, or over $11,000, on one order.

The savings made by centralized purchasing in states are likewise impressive. By buying on a low market price and in bulk for the various departments and institutions, the purchasing office of the state of Massachusetts reduced the average cost of coal from $8 to $6.90 per ton. This coal was purchased on the B.T.U. basis, and was carefully tested to determine its conformance with the specification. The average price of envelopes was reduced from $2.85 to $1.68 per thousand through standardization in sizes and grades, thus permitting purchase in large quantity.

By placing a large contract aggregating $14,000, the state department of purchase of New York in 1925 reduced the price of typewriter ribbons from $1 to 29 cents each, and of carbon paper from $2 to 75 cents per box.

By carefully watching market conditions, the California state purchasing department anticipated a price advance in linseed oil in 1926. In April of that year the department contracted for 1,100 gallons of raw linseed oil at 87 cents per gallon, when the market price was $1.02 per gallon. Before this supply was used by the state, the market price had risen to $1.12 per gallon.

The price reduction through large quantity buying is strikingly shown from the records of the state purchasing office of Maryland. In many purchase negotiations, the supplier is asked to submit bids on the total requirements of the state government for the next contract period and also on the average small-lot quantity of the same article which had been bought on emergency purchases during the past contract period. The comparison of bids shows the price differential between small and large quantity purchases, for the same supplier bids on precisely the same article. Table III

shows the decrease in unit prices demonstrated by this method for 11 representative articles selected from a total list of 280.

The above examples of savings are only representative.[15] They could be duplicated from the records of many other government purchasing offices. On some articles, which are patented or which have a uniform sales price to all buyers, the purchasing office sometimes can buy no cheaper than an individual department. But on the vast majority of commodities used in government service, bulk purchasing will effect a substantial saving. Added to the saving through bulk buying, are of course potential savings through buying at the right time when prices are low, which should be the policy of a well-trained purchasing staff. As stated above, centralized purchasing has demonstrated an average reduction of from ten to fifteen per cent in *matériel* cost.

Why, then, is purchasing not universally centralized in governments? Why is its adoption postponed from year to year and accepted only in the face of a well-organized demand from the taxpayers? Partly because it is a staff function, carried on behind the scenes, and attracting public attention only at rare intervals. A government is judged by the service it renders, regardless of the economy or extravagance of the methods of buying the supplies consumed in providing that service. Unless attention is called to the fact, the average citizen does not realize that supply expenditure takes from 20 to 30 per cent of the average current operating budget.

The awarding of orders and contracts has long been a fruitful source of political patronage. The larger the number of orders and contracts issued by the individual departments, the greater are the opportunities for paying political debts. When purchasing is centralized, the total number of orders and contracts should be reduced, and the average amount of each order should be increased, thereby stimulating wider competition and increasing the difficulty of awarding the public business to the "faithful." For this reason, centralized purchasing is often frowned upon by gov-

[15] Other examples of savings are cited in subsequent chapters in the discussion of improvements in purchasing technique. See pp. 26-28, 32, 50, 106, 110, 111, 114, 117, 118, 271, 272, 275, 277, 294, 300, and 301.

TABLE III

Decrease in Unit Prices, State of Maryland

Specification Number	*Article*	*Average Quantity Bought on Emergency Purchases, Last Contract Period*	*Price Bid Per Unit on Small Lot*	*Quantity Required for State Government, Next Contract Period*	*Price Bid Per Unit on Large Lot*	*Percentage of Decrease in Unit Price*
1/1a	Sugar: (cane) granulated 350-lb. bbls.	700 lbs.	$5.35 cwt.	43600 lbs.	$5.10 cwt.	4.67%
2/a	Coffee: (Rio) whole roasted 100-lb. bags, N. Y. T. No. 7	300 "	12.00 "	12700 "	11.40 "	5
6/1	Hominy: (large) 100-lb. bags	100 "	1.60 "	18600 "	1.54 "	3.75
6/3	Rice: (whole head) 100-lb. bags	200 "	6.25 "	9900 "	5.75 "	8
6/5	Beans: (dried) white, soup, 100-lb. bags	100 "	5.75 "	19000 "	5.50 "	4.35
6/8a	Barley: (coarse) 100-lb. bags	100 "	5.00 "	3900 "	4.50 "	10
7/1	Corn Meal: (white) 100-lb. bags	100 "	1.60 "	3800 "	1.54 "	3.75
8/1	Rolled Oats: (Corno) 90-lb. bags	180 "	3.50 "	18620 "	3.00 "	14.2
11/10	Vinegar: (cider) pure apple=40 Gr.	50 gals.	.25 gal.	950 gals.	.23 gal.	8
12/1	Salt: (fine) table, 100-lb. bags	300 lbs.	.93 cwt.	18300 lbs.	.85 cwt.	8.6
14/4a	Prunes: (70/80s) 50-lb. boxes	100 "	.0975 lb.	10500 "	.095 lb.	2.56

ernment officials. Centralizing the purchasing does not, *ipso facto*, divorce the awarding of orders from political control. But political maneuvering is made much more difficult when one office is responsible for all buying, because that office is more accessible to investigation and more easily controlled by the accounting officials.

The two following chapters will trace the history and development of centralized purchasing in the national, state, and local governments of the United States and Canada. Subsequent chapters will discuss the administration of the purchasing office and the details of the purchasing procedure.

CHAPTER II

PURCHASING IN FEDERAL GOVERNMENTS

The United States

The purchase of supplies has long been a mooted problem in the federal government of the United States. Alexander Hamilton, as the first Secretary of the Treasury, insisted that supplies for the army should be purchased under the supervision of his department. Accordingly, Congress on May 8, 1792, provided that: "All purchases and contracts for supplying the army with provisions, clothing, supplies in the quartermaster's department, military stores, Indian goods, and all other supplies for the use of the Department of War, be made by and under the direction of the Treasury Department."

On January 7, 1794, President Washington recommended to Congress that a purveyor of public supplies be appointed, and an act approved on February 23, 1795, made the purveyor's office a part of the Treasury Department. In 1798 an act of Congress created in the Treasury Department the office of "Accountant of the Navy Department," transferred the purveyor's office to the War Department, and gave the purveyor authority to provide supplies for both the War and Navy departments. In 1799, the Secretary of War was specifically authorized to purchase for the army. The purveyor's office was abolished in March, 1812.

Thus the first experiment with centralized purchasing in our federal government came to naught and doubtless helped to establish the theory that each department should have exclusive jurisdiction over its supply procurement. The War and Navy departments stoutly maintain that the purchasing of military supplies for their respective services is essential to the national de-

fense. Indeed, the mention of centralized purchasing to either an army or a navy official has an effect second only to the suggestion that the Army and Navy departments should be combined. It is like playing with fire or using a stick of dynamite for a hammer!

War-time purchasing, however, showed the need for supervision over the procurement of military supplies. In January, 1918, a director of purchases was appointed for the War Department, under supervision of the chief of staff, with authority to supervise the purchase of all supplies and munitions. But at the close of the World War, the War Department practically reverted to the former practice.

The National Defense Act now charges the Assistant Secretary of War with supervision over the procurement of all military supplies. The Quartermaster General, acting under supervision of the Assistant Secretary of War, buys all articles which are common to two or more services. All articles needed by only one service are bought independently. But while peace-time procurement through the office of the Quartermaster General consists of decentralized purchase, it is subject to centralized control and supervision. The nine geographical departments of the army, each with intermediate supply depots, report their expenditures to the central office in Washington, which attempts to systematize and regulate the prices paid. The department has a full-time inspector who travels all over the country, inspecting boilers and methods of coal consumption, determining the kind of fuel best adapted to a certain purpose, and checking freight rates to determine what field of supply is most economical. The present flexible system is considered a nucleus for a war-time system; in emergency it may readily be changed to one of absolute central control.

In June, 1927, a procurement division was organized in the Quartermaster General's office in Washington. Since that date, it has made bulk purchases of stationery, tobacco, and various food products for all or several of the army departments, with appreciable savings.

Since 1898, a bureau of supplies and accounts has purchased for most branches of the Navy Department, and has established

an enviable reputation for efficiency. The marine corps, although a branch of the Navy Department, has always maintained its separate purchasing agency.

Since 1904, practically all supplies for the Post Office Department, totaling about $16,000,000 annually, have been bought by a purchasing agent, appointed by the President, but under supervision of the Postmaster General.

A bureau of supply was established for the Treasury Department in 1922. A director of supply, acting under supervision of the Assistant Secretary of the Treasury, has charge of the bureau. It has authority to purchase for all branches of the Treasury Department except the bureau of engraving and printing, the bureau of the mint, and the coast guard.

The Department of Agriculture has also made progress toward centralized purchasing. In July, 1923, a director of purchases and sales was appointed and assigned to the staff of the director of personnel and business administration. All important purchases for the Department of Agriculture are referred to the director of purchases and sales, who checks the bids submitted and makes the awards, sometimes after securing additional and more advantageous bids.

A few other branches of the federal government, such as the United States Veterans' Bureau and the United States Shipping Board Emergency Fleet Corporation, have set up their own departmental purchasing agencies, but some of the executive departments and independent establishments still permit each bureau to buy for itself.

One staple article of supply has been purchased centrally since 1918. All coal used by the federal government in the District of Columbia and contiguous territory has been bought, stored, and distributed by the government fuel yards, a branch of the bureau of mines. The fuel yards were started in 1917 by the Department of the Interior on its own initiative and without Congressional sanction, to supply the fuel requirements of that department. Having demonstrated an actual dollars-and-cents savings on coal purchases, the fuel yards received from Congress an appropriation of

one and one-half million dollars for the fiscal year 1919 to establish a coal-buying agency for all the departmental services. The yards have operated continuously since that time.[1]

The World War also revealed the lack of coordination between the federal departments in supply matters.[2] Following the establishment of the bureau of the budget, the President in 1921, by executive order, established the office of the chief coordinator, and gave that official the authority to "exercise general supervision, subject to the director of the bureau of the budget, over the coordination of the routine business activities of the governmental organization with particular attention to methods of purchasing . . . and other ordinary business activities of the government." [3] This executive order further required each executive department and independent establishment to appoint a director of purchases and sales to act as liaison agent with the chief coordinator. Area coordinators have been appointed to supervise purchases by field departments under the policies and instructions of the chief coordinator. By further executive orders eight coordinating boards have been established, composed in each case of one representative of each federal department and independent establishment. The board members, although detailed by their respective departments, are directly answerable to the chief coordinator and through him to the President. One of these, the Federal Specifications Board, has made a monumental contribution to governmental purchasing, as explained in Chapter V.

The Federal Purchasing Board.—A Federal Purchasing Board was also established by executive order in 1921, "to formulate policies and plans designed to knit the purchasing activities of the several departments and establishments into a Federal Business Association, and to bring about business methods calculated

[1] A discussion of the history and operation of the government fuel yards will be found in the writer's article, "Coal-Buying for the Federal Government," *The Purchasing Agent*, September, 1923, pp. 51-54.

[2] The war-time competition between departments of the federal government for the same supplies has been discussed above. See Chapter I, p. 6.

[3] Executive order of July 27, 1921, published in *Circular 15, Bureau of the Budget.*

effectively to safeguard the interests of the government, and at the same time to promote the confidence of private business interests and industrial communities doing business with the government." [4] The board is composed of one representative of each department and establishment, and a representative of the Federal Specifications Board.

"The purpose of the board," as stated by the assistant chief coordinator, "is to coordinate the purchasing activities of all departments of the government with a view to—

1. Securing supplies at lowest prices;
2. Eliminating duplication of effort and reducing overhead expenses; and
3. Establishing economical methods of purchase.

"The board, through its several committees, investigates and studies the purchasing methods used in the several departments, with the view of having improved methods adopted; endeavors to discover those cases where it may be practical and economical to have two or more departments pool their requirements for certain supplies, and have one department best fitted for the purpose, purchase them all." [5]

The board has agreed upon certain general policies. It believes that purchasing should be centralized intradepartmentally, but not for the federal government as a whole; that articles of a specialized nature should be purchased by the using department concerned; that articles needed by two or more departments should be purchased by the department best fitted to do so; that the department making the purchase should also make the inspection; and that contracts should be for immediate delivery rather than for long terms with periodic delivery. Some of the results of the board's coordinating efforts will be discussed in later chapters.

To assist the Federal Purchasing Board in carrying out these

[4] Executive order of August 25, 1921, published in *Bureau of the Budget Circular 25.*

[5] "Federal Purchasing Board Brings Great Savings," by D. B. Wainwright, Jr., assistant chief coordinator, in *The Tax Digest*, January, 1925, pp. 18-21.

policies, a coordinator for purchase was appointed by executive order in May, 1925. This official is authorized "to act as agent through whom the Federal Purchasing Board, acting for and in behalf of the separate purchasing agencies of the government, may, with the approval of the chief coordinator, effect such joint procurement arrangements as may be agreed upon." [6] The Federal Purchasing Board, although lacking authority to buy anything in its own right or to obligate any of the departments on supply matters, has been the means for bringing the departments together for the first time in history to discuss their mutual problems of supply and to attempt a simplification of procurement methods.

The General Supply Committee.—Many years before the creation of the coordinating boards, the federal government established a *contract-making* agency known as the General Supply Committee.[7] It was established by executive order on May 13, 1909, and was made a statutory body by act of Congress in 1910 and placed under the supervision of the Treasury Department. It is composed of one representative of each of the ten executive departments who serve ex officio without additional pay. The office of the committee is supervised by the superintendent of supplies.

The General Supply Committee annually awards contracts for all supplies needed for common use *in the District of Columbia* by any two or more departments and independent establishments of the federal government. Competitive quotations are received and contracts are awarded on each of the 17,000 different supply items used by the government in the District. All the supply items are listed under twenty classifications. These classifications, giv-

[6] Executive order of May 29, 1925, published in *Bureau of the Budget Circular 160.*

[7] The General Supply Committee is the successor to the Board of Awards, set up in 1894. As originally constituted, the Board of Awards had three members: the assistant secretaries of the Treasury, Interior, and Post Office departments. It had power only to examine and compare all bids submitted for the furnishing of supplies and to recommend the acceptance or rejection thereof by the departments concerned.

ing the specification and the contracting vendor of each item, are published for each fiscal year in a large volume called the *General Schedule of Supplies*. Each of the ten members of the committee is responsible for preparing contract proposals on one or more classes of supplies in the general schedule and for carrying out all steps prior to the recommendation of award. The General Supply Committee as a whole is responsible for the recommendations to the Secretary of the Treasury, upon the basis of which that official awards the contracts.

Each executive department and independent establishment must confine its sources of supply to those indicated in the *General Schedule of Supplies*. Since the beginning of the fiscal year 1927-28, the municipal government of the District of Columbia has been required to purchase its supplies, wherever possible, under General Supply Committee contracts. But articles peculiar to the need of only one using department, or any article not listed in the *General Schedule*, may be purchased by the department concerned on its own contract. At the option of the head of the department concerned, the General Supply Committee contracts may apply to purchases by the field services, provided the advertisement for bids and the contract so state. While the purchase is made by each using agency as its needs arise, the order must be placed with the source of supply, and at the purchase price, stated in the *General Schedule*. For example, the bureau of supplies and accounts of the Navy Department must buy all stationery and other supplies actually used in the District of Columbia on the General Supply Committee contracts; but the same commodities may be purchased from any other source of supply if they are intended for use by any of the field services of the Navy Department operating outside the District.

This plan of contract-award has several obvious shortcomings. The government does not contract for any definite quantity. The vendor's only guide to the probable purchases is the amount of the government's orders during the preceding fiscal year. This may fluctuate considerably from year to year. Furthermore, the vendor does not know, except for some commodities such as lumber,

whether the orders will be for carload lots or for dozen lots, nor at what time of the year the orders will be issued. He may receive much of the government's business during a period of peak prices. Consequently, his bid is usually high enough for protection against all contingencies. The General Supply Committee awards most contracts in April of each year, when the prices of some articles are likely to be at the peak. Although the contracts are awarded in April, they do not become effective until July 1, the beginning of the next fiscal year, and continue in effect until the beginning of the following fiscal year. The bidders, therefore, are required to quote prices for orders which may be placed for large or small quantities at any time during a fifteen-month period. As a result, the government pays in many cases what is comparable to a low wholesale price, although the volume of its purchases entitle it to a jobber's price. The General Supply Committee fully realizes this, but lacks legislative authority to change its methods.

The defects of this method of contract-execution were strikingly shown by the first centralized purchase of automobile tires and tubes for the federal government. This purchase was made in the early part of 1923 through the joint efforts of the chief coordinator, Federal Purchasing Board, Bureau of Efficiency, and General Supply Committee. Soon after the *General Schedule of Supplies* was issued for the 1925 fiscal year, each executive department and establishment was asked to submit a detailed estimate of its requirements in tires and tubes for the next succeeding three months. The requirements of all using agencies were combined and competitive bids were asked on *definite quantities* for delivery at definite places and dates. Forty-eight manufacturers submitted quotations, but only those whose products met the quality tests of the Bureau of Standards were admitted to competition. The General Supply Committee had likewise received bids on every size of tires and tubes, but of course had not awarded contracts on account of the initiation of the new plan of definite-quantity purchasing.

The first centralized purchase of tires and tubes amounted to a little over $80,000. The same tires, if purchased by the General

Supply Committee on the bids submitted only a few weeks before, would have cost slightly over $109,000. The saving was over 27 per cent. This saving was actual, not figurative. For one size of a given make of tire the price was $20.75 under the running contract method, and $13.67 under the definite quantity contract. Since that time tires and tubes for the departmental services in the District and for several of the field services have been purchased centrally in definite quantities at quarterly intervals, with even greater savings in some instances. The plan of definite-quantity purchasing has now been extended by the General Supply Committee to over a thousand other staple supply items, with the results exemplified in Table IV.

Definite-quantity purchasing has many other obvious advantages over the running contract method. Outright purchase of a definite quantity for delivery at a definite date enables the vendor to make a quick turnover on stock and eliminate the uncertainties of price fluctuations over the fifteen-month period from the signing of the running contract to its expiration. Delivery of a large-quantity order facilitates careful and uniform inspection prior to distribution to the various using departments, with mutual advantage to both buyer and seller. It brings about a material reduction in accounting and checking for both the purchaser and the vendor through a reduction in the number of orders issued. According to the present system, each participating service must issue its own order for its proportionate share of the purchase, and must check a separate invoice. But even so, the four quarterly purchases of rubber bands in the fiscal year 1924 reduced the total number of orders to 100, whereas 260 orders had been issued for this article by the various departments under the running contract of the General Supply Committee during the preceding year.

All of the 17,000 items covered by the *General Schedule of Supplies* are not susceptible to economy through quantity purchasing. The total purchases from this schedule total about $7,000,000 annually, of which only about $2,000,000 could be purchased to advantage in definite quantities, according to the estimate of the superintendent of supplies of the General Supply Committee. The

TABLE IV [8]

Savings Through Definite-Quantity Purchasing

Item	*Running Contract Price*	*Definite Quantity Price*	*Reduction*	*Percentage Reduction*
Pneumatic tires (average of all sizes)	$28.78 ea.	$18.37 ea.	$10.41 ea.	36¼%
Pneumatic tubes (average of all sizes)	2.76 ea.	1.75 ea.	1.01 ea.	36½
Rubber bands (average ⅛, ¼ and ½-lb. boxes)	.69 lb.	.59 lb.	.10 lb.	14½
Wastebaskets, fibre, round 12″x14″ deep.	.75 ea.	.63 ea.	.12 ea.	16
Erasers, steel, arrowhead	2.24 doz.	1.65 doz.	.59 doz.	26½
Mucilage, in 1-quart cans	3.35 doz.	3.10 doz.	.25 doz.	7½
Paste, photo library, 4-oz. jars with brush	2.84 doz.	2.16 doz.	.68 doz.	24
Tissue, toilet paper, rolls 2,000 sheets	.128 ea.	.1116 ea.	.0164 ea.	13
Impression paper, wove, soft finish basis No. 20 cut and packaged	.0948 lb.	.0743 lb.	.0205 lb.	21½
Hose, water, fabric, with coupling, ¾″, 3-ply, 50-ft. lengths	8.23 ea.	7.38 ea.	.85 ea.	10¼
Turpentine, in barrels	1.07 gal.	.97 gal.	.10 gal.	9¼
Linseed oil, boiled, in barrels	1.00 gal.	.95 gal.	.05 gal.	5
Cheesecloth, bleached, 36″ wide, weight 1 to 1¼-oz. per square yd.	.053 yd.	.048 yd.	.005 yd.	9½
Flags, U. S. standard, hoist 8.94 feet, cotton	9.00 ea.	7.00 ea.	2.00 ea.	22¼

[8] Quoted from "Definite-Quantity Purchasing" by A. G. Thomas, *The Purchasing Agent*, March, 1927, pp. 250-252. Mr. Thomas, associate chief investigator of the United States Bureau of Efficiency, deserves a large share of the credit for initiating and carrying through the plan of definite quantity purchasing for the federal government.

same official estimates that definite-quantity purchasing is already saving approximately $250,000 per year. This saving could be materially increased if the General Supply Committee were given broader powers to extend the plan and were permitted to make the purchases outright from its own funds.

The committee should be converted into a real purchasing agency. It should be given a revolving fund from which to pay for its purchases and which would be reimbursed by the using departments when goods are delivered or issued from stock. This would reduce the total number of orders, with great saving in "paper work" for the government. The committee should be placed in charge of a central storeroom which could be used as a central delivery and inspection point, and from which distribution could be made to each using department as needed. This would release for other use much of the storage space now occupied in the various departments and would result in a great reduction in the total personnel now engaged in stockkeeping. Furthermore, a central storeroom would probably reduce the total stocks of staple items on hand by 50 per cent, thus reducing the carrying charges and releasing funds for other uses. It would also avoid the accumulation in one department of surplus stock which may be needed by another, and reduce the possibilities of obsolescence. With adequate storage space and with funds for payment, the committee could order "mill runs" and carload shipments of commodities at a lower unit cost.

The superintendent of supplies of the General Supply Committee should be vested with greater executive authority than he now possesses, and should be permitted to adjust the manner of purchase to the nature, frequency of purchase, and importance of the individual item to the total expenditures. Some commodities should be purchased in definite quantities at quarterly intervals; others should be bought on a running contract as at present; still others should be bought on contract for varying periods and at varying times of the year, depending on market conditions. According to the present plan, most contracts are awarded at one time, which creates a "peak load" in the office, followed by a

period of comparative inactivity. A change in procedure such as outlined above would permit a distribution of work throughout the year, and would enable a smaller staff to render greater service to the government.[9]

The adoption of these reforms is now made possible through the enactment of a law by the 70th Congress in the closing days of its second session.[10] This law gives the Secretary of the Treasury, acting through the General Supply Committee, authority to determine what commodities now contained in the *General Schedule of Supplies* shall be purchased in definite quantities for the departmental services of the federal government located in the District of Columbia, for the municipal government of the District, and for any field service upon request of the head thereof. A revolving fund, expected to be $500,000 in amount, is established in the Treasury to finance definite-quantity purchasing through the General Supply Committee. This law also authorizes the director of public buildings and parks of the national capital to acquire the necessary land and to erect thereon a building or buildings, "with approximately four hundred thousand feet of floor space," to be used for storage of supplies, materials and equipment needed for the public service in the District of Columbia.

Most government officials are convinced that a central agency to purchase for the entire federal government, both departmental and field services, would be impracticable and undesirable. In this belief the writer concurs, for there is certainly a maximum of scope beyond which centralized purchasing is impracticable. This is shown by the practice of many large private corporations. Opponents of the plan never fail to visualize huge storage warehouses, overstocked with undesirable commodities, and maintained at huge public expense. They fear the creation of a despotic régime which would foist upon the using departments articles

[9] The Institute for Government Research several years ago likewise advocated conversion of the General Supply Committee into a real purchasing agency. See Willoughby, *Reorganization of the Administrative Branch of the National Government,* pp. 268, 269.

[10] H. R. 5769, 70th Congress; signed by the President on February 27, 1929.

unsuited to their requirements. The opposition appears in the main to be traceable, however, to the unwillingness of federal officials to change their time-honored methods of doing business.

It would probably be unwise for one office in Washington to attempt supplying the navy vessels on the high seas, and all the myriad government services from Maine to California. But some form of contract supervision, perhaps like that followed by the Western Electric Company and other large private corporations, would certainly help to coordinate the procurement efforts of the various branches of the government and to stabilize prices paid for supplies. Although the responsibility for purchasing for the entire federal government is decentralized, it is centralized within the separate departments and establishments to as great a degree as prevails in many large private corporations. The logical next step, however, is the centralization of purchases for the departmental services in the District of Columbia, which is now made possible by the recent Congressional act described above. Here the proximity of the using agencies, and their relative uniformity in requirements, present a supply problem no greater than that met and solved successfully by many large city purchasing systems.

The Dominion of Canada

Until 1915 the ministers of the individual departments of the Dominion government purchased independently. But with the entrance of Canada into the World War, the Dominion government faced a more complex supply problem and measures of economy in public expenditure became a necessity. In 1915, therefore, the War Purchasing Commission was created to procure all necessary war materials and supplies. This was the first step toward centralized purchasing.

The War Purchasing Commission was composed of three members, appointed by the Governor-General-in-Council. The office of the commission was placed in charge of a commissioner of supplies, appointed in the same manner. In 1918 the authority of the War Purchasing Commission was extended to the procure-

ment of all supplies other than military, but it was still considered a war-time or emergency body. Two years later, the commission was recognized as a permanent and necessary branch of the government and its name was changed to the Purchasing Commission of Canada. No substantial change was made, however, in the personnel of the commission or in its powers and duties.

The commission made a good record as a purchasing agency. For example, during the fiscal year 1922-23, it purchased all coal used in all government buildings in every part of the Dominion, at prices considerably lower than those paid by the individual using agencies during the preceding year. The Purchasing Commission paid a higher price only in the Province of Manitoba and here the increase in price was only 1¼ per cent. In other provinces the decrease in price ranged from about 5 per cent in Ontario to almost 26 per cent in Alberta. This saving was made in the face of rising coal prices throughout the Dominion. Every effort was made to supply the quality of coal suitable for requirements of the users, and quality was not sacrificed to price.

The Purchasing Commission, however, was much more efficient than popular. It was opposed by the ministers of departments and other officials as a derogation from their rightful powers and privileges. On August 14, 1923, the prime minister submitted a report to the committee of the privy council (the cabinet) expressing his belief "that while the exigencies of war afforded a reason for referring to a commission the general supervision and control of government purchases, experience has shown that the creation of a purchasing commission and delegation to that body of powers and responsibilities formerly exercised by ministers of the crown is not a satisfactory means of effecting such supervision or control; that a more effective and satisfactory means of obtaining a centralizing of supervision and control of purchases and sales of the government is by a sub committee of council clothed with the necessary authority, subject to any statutory provisions relating thereto, to review all government purchases and sales to make such regulations with respect thereto as will avoid overlapping, effect

economies, and ensure, so far as may be possible, uniformity and standardization of purchases as between the several departments of the government."

The Government Contracts Supervision Committee.—In compliance with the prime minister's recommendation, the cabinet abolished the Purchasing Commission of Canada and set up in its stead the Government Contracts Supervision Committee. This committee consists of four members of the cabinet, ministers of the four largest supply-buying departments of the government, who serve ex officio without additional salary and are appointed by the Governor-General-in-Council. The committee appoints a secretary who supervises the work of a salvage officer and other necessary assistants.

The Government Contracts Supervision Committee, as its name implies, *supervises* government purchases and contracts. It has divided the supply requirements of the federal government into seventeen classifications, and has compiled lists of approved suppliers for each commodity. Each department is required to submit to the committee, for review and approval, its requisitions on all proposed expenditures of $500 or over. Upon securing the committee's approval, the department calls for sealed bids which are submitted directly to the committee. All bids are opened and tabulated on the closing date and are delivered to the department concerned. The department decides which is the lowest and best bid, and, if its decision is acceptable to the committee, places the order accordingly. All expenditures under $500 in amount may be made without reference to, or consultation with, the committee. Obviously, any department can sidestep the committee by buying most requirements in small lots, each less than $500 in amount. The committee has authority to fill any requisition for a proposed expenditure in excess of $500 by transfer of surplus stock from some other department.

In some circles, the creation of the Government Contracts Supervision Committee is looked upon as a backward step. The following opinion of a student of Canadian government ably expresses this viewpoint: "Now, however, has come a relapse to

methods which may easily involve political favoritism . . . This means, in plain words, the reëstablishment of the system of giving government patronage to political friends. The new system, or rather the old one restored, is not centralized purchasing, but centralized patronage. The federal government has fallen from the high level of patriotic efficiency reached during the war by the War Purchasing Commission . . . The spoils system dies hard." [11]

The civil service commission of Canada, in its report for the year 1925, summarizes the present situation and expresses the need for centralized purchasing as follows:

> There has been considerable difference of opinion on the question of centralized purchasing, but the principle has the support of several of the largest business concerns in the Dominion, as well as of a number of states in the United States, in which it has been adopted with marked saving in public money.
>
> The purchasing of stationery and office furniture is already centralized in the Printing Bureau and Department of Public Works, respectively, but thirteen other departments maintain a separate purchasing branch for general and special supplies. These staffs comprise some hundred and twelve employees, at an annual cost of over $80,000. The Government Contracts Supervision Committee employs, in addition, eleven at $19,840. The largest purchasing branches are found in the Department of National Defence, the Printing Bureau, the Department of Soldiers' Civil Reëstablishment, the Public Works Department, and the Department of Marine and Fisheries, which vary from twenty-five to twelve employees. Smaller departments, such as Mines, employ two or more. The larger departments mentioned purchase supplies to the extent of well over $1,000,000 annually.
>
> In general, the routine of these branches and the problems encountered are very similar, and the commission is of the opinion that the following benefits would result from the establishment of a central purchasing service, containing a more highly specialized staff of buyers:

[11] George M. Wrong, "Government Purchasing," *First Annual Proceedings of Canadian Civil Service Research Conference,* p. 131.

1. A considerable reduction in staff and salaries.
2. A substantial reduction in the cost of supplies and equipment (rendered possible by bulk purchasing).
3. Better deliveries.
4. Better control.

No details of saving can be furnished at present, but it would be quite safe to put the reduction in staff at not less than fifteen per cent to twenty per cent.[12]

The Government Contracts Supervision Committee acts only in an advisory capacity, since all orders and contracts are placed by the individual departments. Some of these, notably the departments of Public Works, Interior, and Public Printing and Stationery, have well-ordered purchasing divisions for their intra-departmental needs. The committee, acccordingly, seems to accomplish little except for its services in transferring surplus stocks between departments which might otherwise go unused and become a total loss. With the passing of the Purchasing Commission, the Dominion government of Canada has thus in reality reverted to decentralized purchasing, and responsibility for buying has been returned to the cabinet where it rested prior to 1915.

[12] *Seventeenth Annual Report*, Civil Service Commission of Canada, pp. 22, 23.

CHAPTER III

PURCHASING IN STATE AND LOCAL GOVERNMENTS

In State Governments of the United States

Centralized purchasing was given its first trial in state government in the United States about the beginning of the present century. In 1897 Iowa established a board of control, and gave it authority to supervise all purchases for the state penal and charitable institutions. This board now buys for all the fifteen such institutions supported by state funds.

Texas in 1899 created the office of purchasing agent for its eleemosynary institutions. The office was abolished in 1919, when the state board of control was established and was given authority to buy for all departments and all institutions except the state prison.

No legislation on state purchasing was enacted between 1899 and 1910. In 1910 the governor of Oklahoma was authorized to appoint a state board of affairs of three members. This board was granted fiscal and administrative control over all the state's welfare and educational institutions and was given authority to buy not only for the institutions, but for all state departments, boards, and agencies as well. The Oklahoma state board of affairs was, then, the first agency with authority to buy for all branches of a state government. It has been in continuous operation ever since its establishment. At the present time, however, the agricultural department and the state agricultural schools purchase their supplies independently.

The next state to adopt centralized purchasing was Vermont. Its purchasing department, established in 1912, became a division

in the finance department when the government was reorganized in 1923, but no change was made in its purchasing powers or procedure.

In 1913 New Hampshire created a purchasing department which still buys for all branches of the government, except the state agricultural college. In the same year Nebraska and Minnesota also placed purchasing for their state institutions under boards of control. The states of California, Alabama, and West Virginia adopted centralized purchasing in 1915. The California purchasing agency was originally an independent department; but when the state government was reorganized in 1921, it became a division of the finance department. At the same time, the newly created department of public works was authorized to buy for the engineering department and the land settlement board, and the state highway commission was exempted from central purchase, thus dividing somewhat the responsibility for buying. A further reorganization of the state government in 1927 restored to the division of service and supply of the finance department the responsibility of buying for practically all state departments and institutions except the University of California.

The secretary to the governor of Alabama became purchasing agent for some of the state institutions in 1915. Four years later this authority was transferred to the board of control and economy. Since 1923 purchasing of supplies for all departments and for all except six of the educational and welfare institutions has been delegated to the Alabama state board of administration.

Since 1915 the movement for centralized purchasing has gone on with increasing momentum, for it became closely allied with the more comprehensive movement for the budget and centralized administration in state government. Prior to 1915 only five states had adopted budget legislation. Today all states except Missouri operate on a budget system, and centralized purchasing has been recognized as essential to strict budgetary control. The movement for administrative consolidation and reorganization is likewise a development of the past decade. The first thoroughgoing reorganization was made by Illinois in 1917. Since then fourteen

other states have centralized their administration.[1] In six of these states—California, Maryland, Minnesota, New York, Vermont, and Virginia—centralized purchasing had been adopted prior to the reorganization and was of course continued. In the other nine states centralized purchasing was an integral part of the reorganization scheme.

Another factor in the widespread adoption of centralized purchasing has been the expansion in governmental activities and the resultant increase in expenditures for supplies. This is especially true of the expenditures for highways, schools, and welfare institutions. The rapid increase in supply requirements and costs has served to emphasize the importance of economical procurement methods.

Extent of Authority of State Purchasing Offices.—At the present time, thirty-six states purchase all or a considerable part of their requirements in supplies, materials, and equipment through a central office.[2] In twenty-five states the purchasing agency buys for both state institutions and departments, with certain exceptions noted below. In eleven states purchasing is centralized only for the state institutions. The boards of control in Kansas and West Virginia buy for the educational institutions as well as for the welfare institutions. In addition, the West Virginia board of control buys all printing supplies and, upon request, any *matériel* for any state department. The services of the Rhode Island purchasing office are also available to any state department on an optional basis. The situation is reversed in Pennsylvania where the department of property and supplies is authorized to buy for all state departments, but for state institutions only upon their request.

[1] Idaho, Nebraska, and Massachusetts in 1919; Washington, Ohio, and California in 1921; Maryland, Pennsylvania, Tennessee, and Vermont in 1923; Minnesota and South Dakota in 1925, and New York and Virginia in 1927.

[2] This number includes only those states which have centralized purchasing for their departments or institutions or both. Other states have centralized the purchase of one or more supply items; Georgia, North Carolina, and South Carolina, for example, purchase their printing supplies through central offices.

The state of Nebraska has two purchasing offices: one, a division of the finance department, buys for all state departments; the other, the board of control, buys for the state welfare institutions.[3] The sponsors of administrative consolidation in Nebraska in 1919, Pennsylvania in 1923, and Minnesota in 1925, recommended that purchasing be centralized in one agency for the entire state government. In each case, however, the state institutions marshaled sufficient support in the legislature to defeat this plan. Consequently, when the reorganization codes were adopted, the state institutions of Minnesota and Nebraska retained their own central purchasing agencies, while Pennsylvania institutions continued to purchase decentrally.

Any county of New Hampshire, and any county or city of Virginia, has permission by law to buy through the state purchasing office.

No state purchasing agency buys everything needed by the entire state government, for emergencies and crises arise which can brook no delay in securing supplies, materials, or equipment. All states except Pennsylvania and South Dakota permit direct purchase by the using agency in emergencies. Fresh fruits, vegetables, and other perishable foodstuffs are purchased directly by the individual state institutions in Idaho, Kansas, Maryland, Michigan, Montana, Nebraska, South Dakota, Texas, and Virginia. Books are also purchased independently by the state educational institutions in Texas and Virginia. Technical apparatus and equipment are exempted from central purchase in North Dakota, South Dakota, Texas, and Virginia. Massachusetts and Vermont permit the national guard units to procure military supplies through their armory headquarters. All coal used in Wisconsin state buildings is purchased by the chief state engineer. Although the Wyoming state board of supplies by law has exclusive authority to purchase, the board of charities and reform is allowed to buy all groceries and clothing used in the welfare

[3] As stated in Chapter IV, p. 61, a similar situation existed for several years in Minnesota, until, in 1927, the board of control voluntarily relinquished its buying authority for state institutions to the commission on administration and finance.

institutions of that state. The joint purchasing committee of Indiana buys only fifteen staple articles used in the twenty welfare agencies under its supervision. The other commodities used by those agencies are purchased directly and separately.

It seems right and proper to exempt from central purchase certain *classes of commodities* such as perishable foodstuffs, technical equipment, and supplies needed in emergencies. States for reasons of political expediency have made the all-too-common error, however, of exempting certain agencies or *classes of agencies* from central purchasing control. In seven states, the state university is allowed to buy independently. The agricultural schools alone are exempted in Oklahoma. The business agent of the Idaho board of education purchases for the educational institutions, but acts under the supervision of the state purchasing agent. As noted above, eleven states have a central purchasing agency especially for the state institutions; but in all of these except Kansas and West Virginia the educational institutions are exempt. In some states, such as Iowa, Louisiana, and Wisconsin, the state board of education buys for all institutions under its control. But educational officials in all governments insist upon maintaining their identity in *matériel* procurement.

Purchasing for construction and maintenance of highways has been another storm center. In ten states with central purchasing offices, the highway department maintains its own buying organization. Other exemptions from central purchase are the department of health in Pennsylvania and the state legislature in Massachusetts and New York.

The exemption of certain state agencies or classes of agencies is usually a tribute to their political influence and not a recognition that their supply requirements are inadaptable to central purchase. The educational institutions which are loudest in their opposition are usually most in need of some means for reducing supply costs. They are often compelled to curtail their work for lack of funds. If centralized purchasing will make the appropriation dollar go farther; if supplies for state institutions can be purchased centrally without impairment to their efficiency—and the experience in such

states as California, Maryland, Massachusetts, New Jersey, and Illinois show unmistakably that they can—then the institutions are shutting the door in the face of an opportunity. If the central purchasing agency is equipped to buy cement and other construction materials for new buildings, it should be in position to buy such materials for new highways with little additional overhead expense. If it can be entrusted with the procurement of stationery and printing supplies for the rest of the government, then it should be competent to buy such supplies for the state legislature.

Exemption from central purchase should apply only to certain *classes* of commodities, and not to *all* the commodities needed by any state agency or class of agencies. The basis for exemption should be economy or the good of the agency concerned, and not political expediency.

The operating units exempted from centralized purchasing in most states represent, both in number and in buying power, only a small part of the government. New York has over one hundred using agencies, and only the state legislature is exempted from central purchase. The Illinois state purchasing office buys for ten departments with 125 divisions, and only supplies for state highways and for the state university are bought independently. Only in Alabama, Indiana, and Pennsylvania are the state purchasing offices noticeably lacking in authority.

Types of Organization.—The various state purchasing agencies are operated under three general types of administration: (1) separate department or bureau; (2) division in finance department; and (3) ex officio or appointive board.

In five states—Idaho, Illinois, Montana, New Hampshire, and Pennsylvania—the purchasing agency is a separate department,[4] whose head is appointed by and responsible to the governor.[5]

In twelve states the purchasing agency is a division of a de-

[4] In Idaho and Illinois the purchasing office was originally a division of the public works department. In Idaho the purchasing department was created by chapter 139, laws of 1927; in Illinois, by laws of 1925, p. 585.

[5] In New Hampshire the purchasing agency is responsible also to the council, an advisory body of five members, elected at the same time and for the same term as the governor.

partment.[6] In New York, the purchasing agency is a division of the executive department; in the other eleven it is a division of the finance department. The head of the purchasing division is appointed by and responsible to the head of the department, except in Minnesota and Massachusetts. The commission on administration and finance, composed in Massachusetts of four, and in Minnesota of three, members appointed by the governor, has been given plenary control over the state's business affairs. One of the members of the commission is officially designated as purchasing agent in each state.

Twenty state purchasing agencies are administered by boards. These boards are of three different types: (1) elective state officers, serving ex officio; (2) members appointed by the governor; (3) combination of ex officio and appointive members. In Michigan, New Jersey, Oregon, Utah, and Wyoming, the ex officio board is composed of the governor and two or more other state officers who serve without additional salary. Purchasing is only one of the several functions of the Michigan administrative board, the Oregon board of control, and the Utah board of examiners; in the other states, the ex officio board is organized solely for purchasing. The central purchasing bureau in Maryland is in theory supervised by an ex officio board composed of the governor and the heads of eighteen state departments and institutions.[7] In each state the board appoints a secretary or clerk who acts as purchasing agent and is authorized to buy for both departments and institutions, under the board's supervision.

Eleven state purchasing agencies are supervised by boards appointed by the governor.[8] The board ranges in size from two

[6] California, Maryland, Massachusetts, Minnesota, Nebraska, New York, Ohio, South Dakota, Tennessee, Vermont, Virginia, and Washington. Since Nebraska has two purchasing offices this state is included also in the discussion of supervising boards.

[7] The purchasing board of Maryland, however, exercises no control whatever over the work of the state purchasing agent. The board held one meeting at which it vested the state purchasing agent, appointed by the governor, with full authority to act in its name. For administrative purposes the state purchasing office is a division of the finance department.

[8] Alabama, Arkansas, Indiana, Iowa, Nebraska, North Dakota, Oklahoma, Rhode Island, Texas, West Virginia, and Wisconsin.

members in Alabama to nine in Rhode Island. Appointments to the board must be confirmed by the senate in Nebraska and Texas. Since each board is vested with administrative and fiscal powers, purchasing for the state institutions is only one of its several activities.

The purchasing agency of Indiana is supervised by the joint purchasing committee. This is composed of twenty members, appointed at the request of the governor by the board of trustees of each state welfare institution. The work of the secretary, as state purchasing agent, is directly supervised by a subcommittee of three members.

Purchasing in Arizona, Delaware, Kansas, and Kentucky is in charge of a board composed of both ex officio and appointive members. The Arizona board of directors of state institutions is composed of the governor, state treasurer, and a third member appointed by the governor. The governor, state treasurer, and two others, appointed by the governor with consent of senate, constitute the Delaware state board of supplies. The Kansas state board of administration is composed of the governor and three others oppointed by him. The state purchasing commission of Kentucky is composed of the commissioner of public institutions, a member of the state highway commission, and a third member, the chairman, appointed by the governor.

One cannot pass judgment dogmatically upon the types of purchasing organization or claim that a state purchasing agency is more efficient as a separate department or a division in a department than under the supervision of a board. The degree of freedom from political control and legal red tape, and the qualifications of the purchasing staff are important determinants of results under either type of organization. From the standpoint of administration, however, the board type is the least desirable and effective. It is generally conceded that government by board tends to be irresponsible and unbusinesslike. Purchasing in the hands of a multiheaded board is no exception. A board which has many other duties of an administrative nature cannot be expected to concentrate its efforts upon devising and carrying out an effective procurement system.

The present trend in state government is unmistakably in the direction of administrative centralization, including central control of *matériel* expenditures. All of the fifteen states which have reorganized their governments since 1917 have adopted or continued centralized purchasing, and all of them except Pennsylvania have made the purchasing agency a division of a department. Since centralized purchasing is very intimately and very definitely allied with strict budgetary control, many political economists agree that the purchasing agency should be a division of the finance department. Such, as noted above, is the present practice in eleven states.

Centralized purchasing has met with favor in all sections of the country except the Southeast. Tennessee is the only Southern state east of the Mississippi which has centralized purchasing for all its departments and institutions. North Carolina adopted centralized purchasing in 1917 but abolished it four years later. North Carolina has been thus far the only state to reject it after trial. No weightier argument could be advanced to prove the practicability of centralized purchasing for state government.

In the Provinces of the Dominion of Canada

Centralized purchasing was not tried in provincial governments in Canada until 1917. In that year British Columbia established a purchasing bureau in the auditing and controlling branch which corresponds to the state finance department in the United States. This bureau, which is directly under the supervision of the comptroller-general, buys for all provincial departments and institutions.

In 1918 Manitoba established a purchasing bureau in the department of public works. This office does not buy for all the government agencies. The Manitoba telephone system, a government-owned and operated utility, buys independently, and all stationery is purchased by the King's printer in the office of the provincial secretary.

Nova Scotia in 1921 adopted almost verbatim the purchasing

law passed in Manitoba three years earlier, but gave its purchasing bureau much broader powers. It buys practically all supplies for all government branches. Nova Scotia has no government-owned telephone system.

The King's printer of Ontario contracts for printing and buys all supplies for all departments except construction materials needed for new buildings and highways. Each government-supported institution in Ontario procures its supplies separately, but under the supervision of the provincial secretary.

Saskatchewan and New Brunswick have purchasing bureaus in their public works departments. These bureaus purchase for their own departments and, to a limited extent, for some of the other departments. In addition, New Brunswick maintains an office for the purchase of schoolbooks and other educational supplies. But purchasing may still be considered as decentralized in these provinces.

Each of the three Canadian provinces with centralized purchasing—British Columbia, Manitoba, and Nova Scotia—has made its purchasing agency a branch of some other department. The type of organization in Manitoba and Nova Scotia is the same as that formerly operating in Illinois and Idaho—a division in the public works department. The purchasing division of the British Columbia finance department is similar in organizaton to the plan followed in eleven of the states. No provincial purchasing agency in Canada is supervised by a board or maintained as a separate department.

In Counties

Students of government have for years agreed on the need for reform in counties, but their combined efforts and influence have accomplished little. Generally speaking, the counties of New York state, for example, have substantially the same governmental structure as when they were organized in the seventeenth century. Movements have been on foot for many years and in many counties for the adoption of the manager plan of government, but they have made little progress. County government

today is, generally speaking, the same slipshod, hit-or-miss affair as it was a generation ago.

In almost every county in the United States, the chief administrative body is a board of elective officials. This board is variously named: in Pennsylvania and Ohio, for example, it is the board of county commissioners; in New York and California, the board of supervisors; in Massachusetts and New Jersey, the board of freeholders.

The adoption of the annual budget, if the county has one, and the approval of invoices for expenditures, are usually functions of the county board. In some counties the board has little if any control over many of the spending agencies, such as special sanitary or police districts. But in the typical county the governing board retains supervisory control over most expenditures, including those for supplies, materials, and equipment. Since the typical county is the least businesslike of our governments and since its administration is entrusted to a group who are often unacquainted with, and suspicious of, modern business methods, one would expect to find that centralized purchasing has met with little favor in this field. Such is indeed the case. There are over 3,000 counties in the United States, and not over one hundred have centralized purchasing. In a few others, the county board usually checks invoices and sometimes approves orders before they are issued. But only a few have set up a well-defined purchasing system. No county or rural municipality of Canada is known to have a central purchasing agency.

In every county with a special buying agency, the purchasing official, whether serving full time or part time, is under the direct supervision of the county board.

Extent of Centralized Purchasing in Counties.—The first county purchasing agency was established by state law for Monroe County, New York, in 1902. Although elected biennially, the purchasing agent is nevertheless responsible to the board of supervisors of the county.[9] Herkimer County established a purchasing office in 1908 in accordance with a special law; Westchester

[9] See Chapter IV, p. 73.

County did so in 1915. Oneida County appointed a purchasing agent by virtue of a general law passed in 1921 permitting centralized purchasing in any county "not wholly within a city and having a population exceeding one hundred thousand and less than two hundred thousand." [10] Erie County has a highly developed purchasing office for the county government. In Madison and Franklin counties the auditor acts also as purchasing agent. In New York, as in most states, school supplies and road materials are usually purchased independently of the central office.

The general California law prescribing the powers of the board of supervisors includes the right to appoint a purchasing agent. By virtue of another law,[11] the auditor may act as purchasing agent, but under the supervision of the county board. Under these provisions, twenty-two California counties have centralized purchasing. In some counties materials and supplies for highway construction are exempted from central purchase. Prior to 1927, books and supplies for the county school systems in California were in all cases purchased independently. In that year a law was enacted which made it permissive, after July 29, 1927, for all school districts in a county to purchase standard school supplies through the office of the county superintendent of schools, or through the county purchasing agent if the superintendent so delegated the power.[12] After February 1, 1928, such action became mandatory for all elementary school districts and permissive for high school districts. The California Taxpayers' Association has estimated that San Diego County alone would have saved $15,000 if all school supplies had been purchased by the county purchasing agent in 1926.[13]

North Carolina has now gone further than any other state in centralizing county purchases. The 1927 law which reorganized

[10] Chapter 243, laws of 1921. This law was amended by chapter 502, laws of 1925, which permits any county, irrespective of population, to establish centralized purchasing.

[11] Chapter 406, laws of 1923.

[12] Chapter 219, laws of 1927.

[13] *The Tax Digest,* May, 1928, pp. 173-176.

county government made it mandatory for all counties to centralize purchasing in the hands of a member of the county board or some person appointed by that body.[14] This progressive movement should result in great reduction in the cost of county government.

But with the exception of those in New York, California, and North Carolina, only a few scattered counties have adopted centralized purchasing. The superintendent of public service acts as purchasing agent for Cook County, Illinois. Allen County, Indiana; Kent and Wayne counties, Michigan; St. Louis County, Minnesota; Essex, Hudson, and Bergen counties, New Jersey; Hamilton County, Ohio; Multnomah County, Oregon; Allegheny County, Pennsylvania; and Spokane County, Washington, are others which have central purchasing offices.

Partial Centralization of Purchasing in Counties.—Responsibility for county purchases in Texas is shared jointly by the county judge, auditor, and board of commissioners. The auditor advertises for bids on all pending purchases, and furnishes the county judge and board of commissioners with copies of all bids received. The judge examines all bids, but the award of the order or contract is the function of the board of commissioners.[15] This law is general in its application and no county is permitted to appoint a full-time purchasing agent.

Fiscal control in Oklahoma counties is vested in the county excise board, composed of the judge, treasurer, clerk, attorney, superintendent of public instruction, assessor, and one member of the board of county commissioners. The authority of this board is extended to all governmental subdivisions of the county—townships, school districts, special districts, and all municipalities except those which have adopted charters in accordance with "home rule" law. The excise board is given power to determine the kind and quantities of supplies to be purchased by any government in the county. It rarely exercises this power, however, and exerts no control over the purchasing methods, contenting itself with establishing the maximum amount of the supply expenditures in

[14] Senate bill 494, laws of 1927.

[15] General laws of Texas, articles 1479, 1480, and 2268a.

the annual budget. The various using agencies of the counties purchase independently of each other.

The County within a City.—The county which is wholly within, a part of, or coterminous with, a city presents another and distinct problem in the purchasing of supplies. Even though merged with a city and shorn of its powers, the county government usually persists in some form or other. Five counties—New York, Kings, Queens, Bronx, and Richmond—are now within the limits of greater New York, and their governments have been, to a considerable extent, merged with the city government. But the counties continue for the administration of justice, the recording of titles to property, and a few other legal functions. The department of purchase and the board of city record of the municipal government buy practically all the supplies required by the five county governments.

The county of Philadelphia was made coterminous with the city in 1854 by the act of consolidation. Although many county offices have been merged with the city, the county maintains its identity as a legal unit, and all county offices purchase independently. In 1856 the city limits of San Francisco were extended to conform with the county boundaries and the county and city governments were almost entirely consolidated. The governing body is the board of supervisors, elected by wards, and their president is mayor. A bureau of supplies was established in 1923 to buy for the city and county, and purchasing has been almost entirely centralized. Purchasing for the city and county governments of Denver, which have similarly been merged, is also centralized.

The state of Virginia has always recognized the county and the city as distinct governmental units. Counties have no jurisdiction over cities; when any county or part of a county is annexed by and becomes a part of a city, it immediately puts off the county government and takes on the municipal. The same plan is followed in all of the Canadian provinces.

As stated above, the counties of New Hampshire and Virginia are permitted to purchase their supplies through the state pur-

chasing agency, by provision of the law which established centralized purchasing in each state.[16] But the counties in neither state have taken advantage of the opportunity beyond a few experimental orders. It is worthy of note that the state purchasing agent of Virginia purchased equipment for the Manassas County district home for the poor at prices which were from 20 to 33½ per cent lower than those quoted by local dealers.[17] It is believed that the Virginia experiment is a criterion of the savings which could be made for local governments by state purchasing offices.

In some counties a central purchasing office, with a formal organization, would prove a luxury rather than a necessity. But even counties with small populations and limited supply requirements could delegate purchasing as a part-time task to some one official. The average county is about one thousand square miles in area. The using agencies are usually in close proximity to the county seat or to another central point. Central storage and distribution, as well as uniform inspection, would now be practicable and economical in many counties on account of the recent improvement in highways and in transportation facilities. The lack of contact between the buying and using agencies, which in states is sometimes a serious handicap to a successful purchasing plan, thus need not exist in counties. The lack of centralized responsibility and close fiscal control in county government are at present the chief obstacles to centralized purchasing. But when these weaknesses are remedied, as they in time will be, it seems safe to predict that centralized purchasing will find in counties its widest field of future expansion.

In Cities of the United States and Canada

Centralized purchasing owes its present vogue in city government largely to the two leading reform movements of the twen-

[16] Chapter 14, laws of 1919, New Hampshire; chapter 9, laws of 1924, Virginia.

[17] Letter to the writer from Arthur W. James, bureau of county and city organization of the department of public welfare of Virginia, dated August 23, 1928.

tieth century—the commission and city manager plans of municipal administration. Prior to 1900, only two cities had centralized their purchasing. In 1887 a property clerk was appointed for the municipal government of the District of Columbia and was given limited jurisdiction over *matériel* procurement. The work of this official was expanded in 1912 and his title was changed to "purchasing officer." In 1898 Chicago created the office of business agent for buying a part of the city's commodity requirements.

Extent of Centralized Purchasing.—In 1926 the writer conducted a survey which showed that 251 cities of the United States and Canada had adopted the principle of centralized purchasing. Table V classifies these cities by population groups, based on the 1923 estimates of population in the United States and the 1922 estimates in Canada.

TABLE V

Number of Cities with Centralized Purchasing

Population Group	*U. S.*	*Canada*
Less than 10,000	19	6
10— 30,000	62	9
30— 50,000	52	2
50—100,000	39	2
100—300,000	37	3
300—500,000	7	0
Over 500,000	13	0
Total	229	22

In the survey no attempt was made to determine the total number of cities under 10,000 population which purchase centrally. The twenty-five cities of such size listed in the above table are those which came incidentally to the writer's attention while on field surveys. It is likely that other small cities have a centralized purchasing plan in operation.

Centralized Purchasing and the Forms of Municipal Administration.—The commission form of government recognized

the necessity for centralized control in administration and gave a great impetus to the adoption of centralized purchasing. Commission government, however, sometimes tends toward departmental autonomy and self-centeredness. The commissioner of one department often objects to securing his *matériel* at the hands of another commissioner who is a coordinate, rather than a superior, official. Newark, New Jersey, for example, has commission government but not centralized purchasing. The purchasing division of the New Orleans finance department has a well-ordered and efficient system, but the commissioners of the departments of health, parks, and public safety buy their supplies independently.

As might be expected, centralized purchasing follows in the wake of the city manager plan of government. As stated in the 1922 report of the city manager of Carlisle, Pennsylvania: "An axiom of the advent of the city manager form of government to a municipality seems to be the establishing of centralized purchasing. Such was the case in Carlisle. In fact, one of the first actions of the new administration was to centralize all purchasing." When an administrator is solely responsible for an economic and efficient government, he naturally uses every possible means to curb unnecessary expenditures. Of the 109 municipalities of more than 10,000 population which had managers in 1926, all except 16 had established centralized purchasing. In a few cities, it antedated the adoption of the city manager plan;[18] but in most cases, centralized purchasing has been one of the by-products of the new form of government.

For this study of organization and procedure in purchasing, the writer selected 55 cities with the mayor-council form of government; 26 with the commission form; and 90 with the city manager form, which were believed to be representative of different sizes and types of organization and of the various geographical sections of the United States and Canada. Figures cited on sub-

[18] This is especially true of the larger city manager municipalities. Kansas City adopted centralized purchasing in 1903; Cleveland, 1907; Cincinnati, 1913; and Fort Worth, 1918.

sequent pages refer, therefore, to 171 cities, and not to the total of 251 cities which have adopted the principle of centralized purchasing.

Extent of Authority of City Purchasing Offices.—Cities rarely centralize the purchasing of *all* supplies in one office. In this study a city is considered as having centralized purchasing if a central purchasing agency has been established by state law, charter, or ordinance. All too frequently, purchasing is centralized in theory and not in fact.

In some cities the using agencies either openly defy the law or manage to defeat its purpose by deferring their purchases until an "emergency" exists and then buying directly, by placing their orders directly and then having the purchasing office confirm them on a regular order form, or by securing from the purchasing office a blanket authorization to buy certain classes of articles for a certain definite future period. The subcommittee on purchasing, appointed by the Baltimore commission on efficiency and economy, found that in 1923 only 35 per cent of the city's purchasing passed through the central office, and that almost one-third of the purchases by the central office were merely in confirmation of those made directly by the using agencies. The ordinance in effect at that time in Baltimore clearly provided for centralized purchasing, but it was never effectively enforced.

In cities, as in states and counties, the educational institutions are in most cases exempt from centralized purchasing. With the slogan that the schools should be free from political control, the educational authorities have been unusually successful in achieving autonomy. In a majority of cases, the school system is independent of the city government, levying and spending its own tax budget. School *matériel* requirements are purchased through the central offices only in New London, Connecticut; Knoxville; Milwaukee; Washington, D. C.; St. Paul; San Francisco; and Shawinigan Falls, Quebec. In Minneapolis, schoolbooks alone are exempted from central purchase. A purchasing system is operated separately for the schools and in duplication of the work of the central buying office in many cities, such as Cleveland,

Akron, Salt Lake City, Los Angeles, and Seattle. In others, such as Lakewood, Ohio, and Newark and Trenton, New Jersey, purchasing has been centralized for the schools, but not for the rest of the city government.

Books for the city library are purchased independently in many cities, among them San Francisco; Bridgeport, Connecticut; Chicago, Joliet, and Oak Park, Illinois; Des Moines; Akron; Cincinnati; Columbus; and Seattle. Supplies for parks are exempted from central purchase in some cities such as Fort Worth, Savannah, Davenport, Louisville, Nashville, Seattle, and Spokane. Medical, food, and maintenance supplies for hospitals are exempted in Calgary, Alberta; Augusta, Georgia; Atlantic City, and a few others.

Purchasing is only partially centralized in New York City and Chicago. The New York department of purchase buys only for the thirty departments whose heads are appointed by the mayor, and to a certain extent for the five counties within the city. The president of each of the five boroughs buys separately the supplies, materials, and equipment for the public works activities under his control. The board of education buys all school supplies through its own purchasing office. All printing and stationery used by the city government and by the counties is bought by the board of city record, composed of the mayor, comptroller, and corporation counsel.

The business agent in Chicago buys approximately one-third of the city's supplies, materials, and equipment. The schools, parks, public library, board of elections, and houses of correction buy all their supplies separately, while the departments of health, police, fire, and gas and electricity buy directly all orders over $500 in amount. For all other departments than those above mentioned, the business agent places all orders under $500 on his own authority and orders over $500 with consent of the city council.

In other large cities, by way of contrast, the purchasing agency has almost complete jurisdiction over purchasing. In Philadelphia only the schools and the public library buy indepen-

dently; in San Francisco only the library is exempted. In Pittsburgh and Cleveland only the schools are permitted to buy through a separate office. The purchasing department of Detroit buys for the entire city, except the schools and welfare institutions. The purchasing office of Washington buys for every municipal agency in the District of Columbia.

In almost every government the extent of authority of the purchasing office is a controversial question. Educational institutions, hospitals, libraries, and street and highway officials generally claim that their requirements are not adapted to centralized procurement. In some cases their stand is justifiable. Technical equipment and instruments for laboratories and engineering services have long been selected on the basis of the preference of the user for a favorite make or brand. Physicians in hospitals feel more secure in their work if they can prescribe their choice of drugs, anæsthetics, and medicines, and employ their choice of surgical instruments. As a matter of fact, the market price of such commodities is relatively uniform between brands so that oftentimes the central purchasing office could save little over the price paid directly by the user. Furthermore, when the welfare or life of human beings is at stake, it is false economy to force upon professional staffs any instruments and supplies in which they lack faith and the use of which may involve a psychological handicap.

Welfare and correctional institutions, especially in states, prefer to purchase butter, eggs, milk, and other perishable foodstuffs from local vendors upon whom they can depend for satisfactory quality. Very often such commodities can be procured locally at lower prices than from a far-off supplier. It is quite the common practice in states, therefore, to permit the stewards of institutions to arrange their own purchases of such articles. In cities, however, where the using agencies are in close proximity, perishable foodstuffs can usually be purchased on contract for the combined requirements of all users at greatly reduced prices. In such cases, purchases by the individual institutions should not be permitted.

Even though the individual department or institution be per-

mitted to purchase special articles, the central purchasing office should exercise some degree of control and supervision. Copies of all departmental orders should be sent to the central office to be filed with copies of regular orders, and all vendors' claims should either be submitted through, and paid through, the regular channels, or should be financed from a revolving or petty cash fund, controlled by the central office and reimbursable upon presentation of paid invoices.

But, as stated above, the writer believes that exemption from central purchase should be based upon certain *classes of articles* and not upon certain *classes of using agencies*. The city hospitals should not be allowed to purchase all their requirements independently, simply because surgical instruments, drugs, and a few other articles are to be bought according to the choice of the user. Textiles, furniture, bedding, and many other commodities, used by hospitals in common with other government agencies, should be bought in bulk through the central office, on standard specifications wherever possible. The same arguments apply to purchases for the city school system. It is conceded at once that the city purchasing agent should not decide upon the textbooks to be used. But stationery, furniture, fuel, and other staple commodities should be purchased for schools by the same buyers who purchase them for other branches of the city government. Most schools, in common with other public services, are pressed for funds to meet the demands made upon them. School officials, therefore, should willingly participate in any measure of economy which will increase the purchasing power of the tax dollar. Conversely, since it is highly important for the schools to receive the quality of supplies suited to their requirements, the opinions of school officials should have great weight in determining the purchasing policy and the commodity specifications. School supplies are being purchased satisfactorily through the central office in seven cities which tends to prove that it is a practicable arrangement.

The field of usefulness of purchasing offices is expanding from year to year. As stated above, the Detroit purchasing department buys for all municipally owned and operated utilities. Some city

offices supply all contractual services required by the city government, such as telephone, telegraph, electric light, and gas. Insurance on all city-owned buildings and property is handled by the purchasing office in San Diego, California. The purchasing division of Rochester, New York, and the purchasing department of Pennsylvania have charge of the renting, leasing, or sale of publicly owned real estate. The purchasing offices of Dayton, Ohio; San Diego, California; Milwaukee; Rochester, New York; and Los Angeles County, California, among others, operate a printing and multigraphing division in which all routine forms required by the government are prepared at a considerable reduction over prices charged by private printers. In some states, the purchasing office buys the raw materials used in the prison factories.[19] State purchasing offices have as yet done little purchasing for the state-aided institutions which are usually classed as private agencies, although to combine their requirements with those of the public agencies would be a logical field for the further extension of centralized purchasing.

The extent of authority granted to the purchasing office should naturally be dictated by local circumstances and requirements. But the present trend and the future outlook point to the ultimate centralization in the purchasing office of the responsibility for buying all supplies, materials, and equipment needed for the public service.

Types of Organization.—Municipal purchasing agencies operate under four general types of organization: (1) separate department; (2) division of a department; (3) under direct supervision of chief administrator (mayor or manager); and (4) ex officio board. No appointive board is in charge of purchasing for a city. Table VI shows the number of cities included in this study, classified by types of purchasing organization and by the form of government.

There is relatively little difference between the forms of government in the number of purchasing agencies which are maintained as independent departments or as divisions in another de-

[19] See Chapter VII, p. 180.

TABLE VI

Types of Organization

Purchasing Office is	*Mayor-Council or Commission Government*	*City Manager Government*
Separate department	34	24
Divison in a department	35	22
Under supervision of chief administrator	5	44
Under supervision of ex officio board	7	0

partment. When the purchasing agency is a division under city manager government, it is most commonly placed in the finance department. This is the case also in twenty-two cities with mayor-council or commission government. In seven cities, purchasing is a division of the public works department.

But a marked divergence is found between the forms of government in the number of purchasing agencies directly supervised by the chief administrator. Purchasing is under the direct supervision of the mayor in Mobile; Birmingham; Joliet, Illinois; Waltham, Massachusetts; Macon, Georgia; and Atlantic City. Purchasing is personally supervised by the manager in thirty-four cities having from 10,000 to 30,000 population and in ten cities having from 30,000 to 60,000 population. In some cases, the routine work of purchasing is carried on by the assistant or the secretary to the city manager; in all cases, however, the manager assumes full responsibility for decisions and for award of orders. In larger cities the manager's approval is required on orders over a certain maximum amount, although the purchasing routine is delegated to the city clerk or to some other official. As might be expected, some official other than the city manager is in active control of the purchasing in all cities of over 60,000 population. This shows how city manager government adapts method to need. Very few cities of 10,000 to 30,000 population, on account of the limited volume of purchases, can afford a full-time purchasing agent and purchasing staff. Realizing, therefore, the importance

to an economical administration of strict supervision over supply expenditures, the manager in the small city reserves this function to himself.

It is worthy of note that no manager-governed city purchases through an ex officio board. But in many mayor-council cities, such as Columbus, the board of purchase is composed of the mayor, city treasurer, and directors of the service and safety departments; in Seattle and Nashville the board of public works oversees purchasing in connection with its other functions; while in Milwaukee the central board of purchases is composed of the mayor, two members of the council, the commissioner of public works, and one representative of each of the administrative departments or boards, including the board of school directors.

In cities of less than 10,000 population, purchasing is usually a part-time function of some unit of the government. It is a part of the work of the city clerk in Park Ridge, Illinois; of the city engineer in Olympia, Washington; and of the chief fiscal officer in Mechanicsville, New York; Two Rivers, Wisconsin; and Prince Albert, Saskatchewan. The only municipality of less than 10,000 population known to have a full-time purchasing agent is Winnetka, Illinois. But in that city the volume of purchases is unusually large because all public utilities are municipally owned and operated.

Ninety-five cities of over 10,000 population have full-time purchasing executives, of which thirty-seven are manager-governed municipalities. In sixty cities of over 10,000 population, purchasing is a part-time duty of some official. As already noted, in forty-four cities the manager himself is responsible for purchasing In five cities, purchasing is a part-time duty of the city clerk; in six, it is supervised by the head of the finance department; in four others, the head of the public works department is in charge. The cities of Calgary and Lethbridge, Alberta, and Saskatoon, Saskatchewan have established stores departments with a purchasing division supervised by the storekeeper. Such subordination of purchasing to storekeeping is not found in any municipality in the United States.

CHAPTER IV

ADMINISTRATION OF THE PURCHASING OFFICE

Legal Basis for a Purchasing System

A government purchasing office is a creature of law. It is established by the action of a state or national legislature or a city council, or by referendum vote of the people; it can be abolished by the same process at any time. Except for those rare instances, mentioned below, where they have been established by executive order of a city manager or mayor, public purchasing offices derive their authority from statutory law. Most state constitutions specifically require advertisement of, and competitive bidding on, public contracts, but no constitution sets up a central purchasing system.

In States.—All existing state purchasing systems are based on state laws. Since most state constitutions provide for the awarding of contracts on a competitive basis, statutes on purchasing follow this prescription, and generally set forth other legal requirements for procedure. For the most part, however, the details of purchasing procedure are contained in administrative rules and regulations rather than in statute law; accordingly, the procedure, skeletonized in the statute, is made subject to rules and regulations to be formulated and changed at will by the administrative official or body. This is a sound policy. The purchasing rules and regulations, thus subject to alteration without legislative consent, can more easily be kept in conformance with changing conditions. For example, the 1927 Oregon law, which constituted the board of control as the state purchasing agency, is less than three hundred words in length; but the act provides that

"the said board shall adopt such rules and regulations and prescribe such forms, blanks, etc., not inconsistent with law, as shall be necessary to administer the provisions of this act." [1]

Administrative law may often bring about results difficult of accomplishment by statute law. When the commission on administration and finance was established in Minnesota in 1925, political opposition in the legislature prevented a complete centralization of purchasing responsibility; the state board of control, supervising the eighteen state institutions, was permitted to retain its separate purchasing office. At the beginning of 1927, the board of control, on its own volition, appointed the purchasing commissioner of the commission on administration and finance as its purchasing agent also, thus merging the buying responsibility for the state government without legislative enactment. This change in administration does not appear in the statute books of the state.

In Counties.—County purchasing offices are for the most part established under general permissive statutes. In states which, like California, have a county code, one law applies generally to all counties. Section 4041 of the California political code enumerates the powers of the county boards of supervisors and permits the employment of a purchasing agent, whose duties shall be prescribed in detail by regulations of the board in each county.[2] Michigan, in 1917, enacted a general law which permitted any county to establish a central purchasing office.[3] The purchasing procedure is prescribed in detail in the law, allowing very little latitude for variance to meet local conditions. New York has a general law applying to all counties having from 100,000 to 200,000 population, which permits the establishment of a purchasing department, subject to regulation by the local county board.[4] This general law is supplemented by special laws applying to particular

[1] General laws of Oregon, 1927, chapter 279.

[2] Paragraph 21, as amended by chapter 377, laws of 1919; chapter 165, laws of 1921; chapter 890, laws of 1923; and subsequent enactments.

[3] Public acts, 1919, No. 307.

[4] Chapter 502, laws of 1925. Cf. footnote, page 47 *supra*.

counties, such as Herkimer,[5] Monroe,[6] and Westchester.[7] In connection with its reorganization of county government, North Carolina in 1927 required all counties to centralize their purchases in the hands of one person, either a member of the county board or some other official delegated by that body.[8]

The most practicable legal basis for county purchasing is a general law which vests in the county board the authority to prescribe the details of procedure. In this respect, the laws enacted in California and North Carolina are quite in contrast with the Michigan law which attempts to prescribe the purchasing procedure in detail for each county. The widely varying conditions and requirements of counties in most states cannot be satisfactorily met by a detailed general enactment.[9]

In Cities.—The city, like the county, is the creature of the state, and is therefore subject to state legislative control, unless the state chooses to delegate its authority to local governing bodies. In states which have not granted "home rule," the city purchasing system must find its authorization in a general or special statute. Pennsylvania may be cited as an example. The charters of first, second and third class cities of Pennsylvania are adopted and amended by the state legislature. The charters of the first class city (Philadelphia) and the second class cities (Pittsburgh and Scranton) specifically provide for a department of supplies, while third class cities are authorized to create a purchasing department by local ordinance. Centralized purchasing is thus made mandatory in first and second class cities, and permissive in cities of the third class.

At the other extreme stands California, which permits all cities

[5] Chapter 17, laws of 1920.

[6] Chapter 309, laws of 1902.

[7] Chapter 47, laws of 1915.

[8] Senate bill 494, laws of 1927, section 6.

[9] Appendix B reprints a general law which was prepared by the writer in collaboration with the Ohio State Committee on Centralized Purchasing and was introduced to the general assembly of Ohio in 1927, but which failed of passage. This measure outlines the essential provisions of a workable county purchasing plan which permits local formulation of the detailed procedure.

of over 3,500 population to adopt and amend their own charters by local referendum. In all, fourteen states have accepted the principle of home rule, by which cities, with minor and varying exceptions, may adopt and amend their charters without state legislative consent. Although this list constitutes a minority, it includes the more populous states, so that almost two-fifths of all cities over 25,000 population now have home rule. This usually carries with it the authority to establish centralized purchasing.

Cities and towns of Massachusetts are permitted by a general law to establish a purchasing department by referendum upon the consent of a "majority of the voters voting thereon." [10] (Popular approval may be expressed by vote of town meeting, as was the case in Greenfield, Massachusetts.) The procedure of the purchasing system, thus established by popular vote, is left for determination by the local legislative body.

Centralized purchasing may also exist by virtue of executive order of the city manager, as in Stratford, Connecticut, and Alexandria and Petersburg, Virginia; or on resolution or order of the mayor and council, as in Mobile, Alabama; Waltham, Massachusetts; and Superior, Wisconsin. The Municipal Acts of Alberta and Saskatchewan authorize the municipal councils to appoint such officials and create such departments as are necessary to the successful conduct of local government; this naturally includes centralized purchasing wherever deemed necessary by the local administration. In fact, any Canadian city may adopt centralized purchasing without express permission of the provincial legislatures.

Over fifty cities of the United States and Canada provide for centralized purchasing in their charters alone, while sixty cities have established it by ordinance only. Thirty cities have both charter and ordinance provisions on the subject. Centralized purchasing is provided in sixteen cities of the United States by special state laws, and by act of Congress in Washington, D.C.

The most satisfactory legal basis for centralized purchasing in cities is both by charter and by ordinance. The charter, being

[10] Massachusetts general laws, 1912, chapter 41.

the fundamental law, is less easily altered than is an ordinance of the council; it is therefore less subject to the shifting winds of politics. Centralized purchasing is important enough to be made a part of the charter, and is too important to depend for its existence only upon the will of the city council, which may about-face with a change of administration. But the charter, being more permanent, should not attempt to set forth the details of the purchasing procedure. These should be prescribed by ordinance, which can be altered by the council at any time and so made to conform to changing conditions.

The Essential Provisions of Purchasing Laws.—Although each law on purchasing should take cognizance of peculiar local conditions, the following general provisions should be included to make possible a successful administration of the purchasing system:

The Place of the Purchasing Agency in the Government Structure.—The state or county law or city charter should clearly define the relationship of the purchasing office to the government of which it is a part. The title of the purchasing agency should also be stated. The title itself usually indicates whether the purchasing office is a bureau or division of an existing department, a separate department, or a board. The law should also indicate the official or body which is to supervise the purchasing office.

The Purchasing Official.—The law should define the title of the purchasing official and the extent of his authority over his subordinates. It should also prescribe how and by whom the purchasing official is to be appointed, the tenure of his office, the means for his removal, and the bond required of him, if any. Many state laws fix the salary attaching to the office, but in counties and cities the salary is usually determined by the legislative or supervisory body and recorded in an ordinance or in administrative rules and regulations.

Powers and Duties of the Purchasing Office.—A separate section of the law is usually devoted to a statement of the powers and duties of the purchasing office. This defines the extent to

which purchasing is centralized, with an enumeration of the using agencies of the government which are to continue to purchase independently. The authority of the purchasing office to inspect, or to supervise the inspection of, deliveries and to have tests made for determination of their quality, should also be covered in this section. If a central storage system is to be provided, the relation of the purchasing office to its administration should be defined, and provision should be made for the setting up of a stores revolving fund. If the purchasing official is to have authority to transfer commodities between departments or to sell surplus goods, this should be stated in the law.

Standardization of Supplies.—The requirements for the adoption and enforcement of standard specifications likewise should be clearly set forth in the law, which should also designate the official or group by whom specifications are to be formulated and adopted, and the means for their enforcement.

Restrictions on Purchase Negotiation.—Almost without exception, the laws on purchasing require public advertisement of proposed expenditures over a certain maximum amount, the award of the order or contract to the lowest and best bidder, and the submission of surety to guarantee performance of contract. Provision is also made for waiving of competition in emergency. Some laws also proscribe business dealings with any firm in which the purchasing or using official is financially interested.

Miscellaneous Provisions.—The law should provide for transfer to the purchasing office of the powers, duties, and official records of any agencies it is to supersede. The date when the law is to become effective should also be fixed.

These essential provisions for a state law or city charter merely outline the nature, responsibility, and functioning of the purchasing office. As stated above, the details of the procedure to be followed should be subject to change at any time without legislative consent or referendum vote, and should therefore be prescribed by rules and regulations of the administrative body

or by ordinance of the city council.[11] The provisions of existing ordinances and rules and regulations are discussed and appraised in the following chapters.

The Personnel of a Purchasing Office

The personnel of a purchasing office is even more important as a factor in successful administration than is the law which governs it. No matter how satisfactory may be the law or administrative rules and regulations, a purchasing office will not properly discharge its function if it be manned by an inadequate or unqualified staff.

The Purchasing Agent.—The most important factors for successful administration of this office are the qualifications, methods of appointment, tenure of office, salary, and bond of the purchasing agent, which are discussed seriatim below.

1. Qualifications.—The directing heads of public purchasing offices bear a variety of titles, such as "purchasing agent," "purchaser of supplies," "commissioner of supplies," and "business agent." In this book such official will be referred to as the "purchasing agent," the title most frequently conferred upon the individual performing comparable duties for private corporations.[12]

Upon the purchasing agent rests the major responsibility for

[11] The reader will find in Appendix B the charter section and ordinance now in operation in San Francisco, the law and rules and regulations effective in Milwaukee, and the model charter section on purchasing recommended by the National Municipal League. Recommended standards for the administration of a city purchasing system may be found in *Standards of Financial Administration,* by Lent D. Upson and C. E. Rightor, published as a supplement to the *National Municipal Review,* April, 1928, pp. 131, 132. Recommended charter provisions for purchasing were submitted to the Governmental Research Conference at its annual meeting in Cleveland, Ohio, May, 1923, by a special committee on the subject. Among the best laws on state purchasing are those effective in Tennessee and New York, which are, respectively, 1923 laws of Tennessee, chapter 7, sections 20-23; and 1926 laws of New York, chapter 546, sections 48-55.

[12] Although the term "purchasing agent" is almost universally established as the title for the head of the purchasing office, the writer believes that "purchaser" or "purchasor" would be a more fitting title, and more in line with the titles of other public officials such as the "mayor," "governor," "comptroller," or "auditor."

the success or failure of the office. Although in large organizations the purchasing agent cannot personally perform all the routine duties, he is nevertheless held accountable for executing the policy prescribed by law or by his supervisory superiors. The forms in use, the procedure followed, the qualifications of the subordinate staff and their attitude toward their work have much to do with the smoothness of operation and the success of the purchasing office; but more important are the qualifications and the personality of the directing head. The successful purchasing agent of today is generally a man of exceptional qualifications.[13]

He should be endowed by nature with good judgment, shrewdness, tact, a sense of values, foresight, initiative, and, above all, common sense. Supplementing his natural equipment, he should have business training and experience, a thorough familiarity with market conditions, and an intimate acquaintance with the commodity requirements of the government units which he serves. Formerly the ideal purchasing agent was a barterer who decided what to buy on the basis of price alone, and who was not above "sharp practice" in his dealings with suppliers. But today quality and performance are considered of equal importance to price as buying determinants.

The purchasing agent occupies a unique position in the government in his relationship with sales representatives of supplying concerns. When purchasing is centralized, the salesman carries on his negotiations with a single office; whereas, under the decentralized system, if he failed to sell to one department, he still had a chance to sell to other departments. It is important, therefore, for the purchasing agent or his subordinate buyers to give a fair reception and hearing to every salesman whose line of merchandise is used in the public service, if the government is to maintain a

[13] The typical buyer described by Elbert Hubbard would fall far short of modern specifications: "The typical buyer is a man past middle life, spare, wrinkled, intelligent, cold, passive, noncommittal; with eyes like a codfish, polite in contact, but at the same time unresponsive, cool, calm and damnably composed as a concrete post or a plaster-of-paris cat; a human petrification with a heart of feldspar and without charm or the friendly germ, minus bowels, passions or a sense of humor. Happily, they never reproduce and all of them finally go to Hell."

good reputation with the outside business world. The human equation cannot be entirely eliminated from buying. The purchasing agent, in every contact with a salesman, is the representative of the government; the attitude of the salesman, often a taxpayer, toward the whole government, will be tempered by his liking or disliking for the purchasing agent. Since the purchasing agent can fill an important rôle in creating good will and confidence in the public mind toward the government, it is essential that he exhibit a spirit of cordiality and fair play toward all visitors to his office. Furthermore, situations are bound to arise where extraordinary service from the vendor is necessary to cope with an emergency. Such service is easier to secure from the supplier who has been given a square deal by the purchasing agent. Friendliness never fails to pay dividends.

The purchasing agent should know the true value of what he is buying, but must be fair enough to concede a margin of profit to the vendor. While he cannot be expected to know everything, he should know enough about the salesman's line to discuss it with him intelligently, else he may be victimized. If, however, the purchasing agent has established a reputation for fair dealing, the salesman will be less likely to take an unfair advantage. The purchasing agent who is uniformly suspicious of, and churlish toward, salesmen, and who is consistently a "price-buyer," in the long run will pay higher prices and thus penalize the government he represents for his own shortcomings. Many public purchasing agents dispense with examination of samples and conferences with salesmen because they are required by law to accept the "lowest and best bid"; but the selection of the best bid will be made on a more scientific basis when the buyer knows the quality which each bid represents.

A purchasing agent can gain a liberal education from the salesman. Every sales representative should know more than the buyer about the manufacturing processes, the performance record, and the suitability of his goods for the government's requirements. By conferring with the representative of each competing vendor, the purchasing agent will be prepared to decide which is really the

lowest and best bid, and will acquire a cumulative knowledge of the qualities best adapted for the public service.

The purchasing agent must, however, sharply differentiate between friendship and bribery. The buyer, like Cæsar's wife, must be "above suspicion." He cannot afford to jeopardize his personal reputation and the reputation of his government by accepting gifts which may be thinly disguised bribes for diverting past or future orders toward the giver.

Tact is required, too, for the purchasing agent's relationship with the officials of the using departments. He should know what each using office is doing so that he can supply the kind and quality of commodity best adapted to its requirements. This knowledge should be first hand, if possible. He should not try to force upon using departments his choice of quality, but rather should make every consistent effort, within the limits of established standards, to meet the demands and wishes of the users.

Tact and diplomacy are especially to be desired in the purchasing agent who is in charge of a newly established central purchasing system. To take over without friction the buying functions formerly carried out by individual departments is no mean task. As soon as possible after taking office, the purchasing agent should visit each department head and discuss with him his work program and his commodity requirements. With the proper personality and with the proper attitude of service, the purchasing agent can thus go far in breaking down the traditional opposition of using officials toward centralized purchasing. To do this in large states, he will need to travel considerably. But no wiser investment can be made than to provide the purchasing agent with funds and with sufficient time to visit the using officials and to study their work and their needs at first hand. Funds should also be provided to enable the purchasing agent and his staff of buyers to visit the plant or distributing points of the principal suppliers. Familiarity with the process of manufacture and with the selling organization is a valuable asset. Many buyers, through plant visitations, have acquired information which led to a change in specifications to the mutual advantage of both the buyer and the seller. An ac-

quaintance with the members of the supplier's staff lends a personal touch which is often beneficial in securing prompt service or in making adjustments on future orders.

More important still, the purchasing agent should possess the ability to instill and to maintain the proper *esprit de corps* in his own staff. A small staff will often do more and better work for a directing head whom they like and respect than will a large staff working under a purchasing agent whom they dislike. To build up the necessary morale in his office, the purchasing agent must first of all be himself a worker. He must know and have the proper appreciation of what each staff member is doing. He should be "on the job" and, by his own industry and zeal, set the example for his subordinates.

To measure up to the requirements of his office, the purchasing agent should have time to study and to plan. Many purchasing agents are helpless to avoid the charges made against them, of churlishness towards salesmen and of ignorance of purchasing technique and of the needs of the using departments, because they are so burdened with details and handicapped by lack of assistants that they must stay in their offices and be everlastingly at work in order to keep ahead of the procession of day-to-day duties. Purchasing will not reach its true stature until the government recognizes the office of purchasing agent as an executive rather than a clerical position. The purchasing agent should be relieved of petty details, and given enough help and funds to plan and execute his work leisurely.

In 1925 the commission on efficiency and economy of Baltimore appointed a subcommittee on purchasing, composed of the state purchasing agent and buyers for several leading private corporations, to recommend a purchasing system for that city. The committee recommended, in part, that: "The purchasing agent should be, above all, a man in whom implicit confidence can be reposed, one above reproach as to character and square dealing, a man capable and experienced." Purchasing demands broad qualifications and offers excellent opportunity for acquaintance with governmental administration. The office of purchasing

agent therefore presents an almost unparalleled training for higher executive positions in the public service. Many public officials in the higher ranks have started their careers in the purchasing office.

2. Appointment.—The means by which the purchasing agent is inducted into office depends upon the place of purchasing in the government structure. If the purchasing office is an independent government unit, the purchasing agent is generally appointed by the governor, the county board, the mayor, or the city manager. This is as it should be to carry out the plan of centralized control. If responsibility for administration is centralized in the chief executive, he should have the authority to appoint as purchasing agent a man who will be loyal and who will carry out the policies of the administration. In most states, the purchasing agent is appointed by the governor, with or without the concurrence of one or both houses of the legislature, or by the administrative board who in turn owe their appointment to the chief executive. In Massachusetts and Minnesota, for example, the commission on administration and finance is appointed by the governor, and one member is designated as commissioner of purchases to be actively in charge of the purchasing office, subject to the concurrence and advice of his fellow board members.

In counties, the purchasing agent is generally appointed by the county board of supervisors or commissioners. This is the case in all the counties of California and New York which have centralized purchasing, with the single exception noted below. As stated above, the county board in North Carolina may designate one of its members as purchasing agent, or may select an outsider. This wise provision allows latitude for the nature and complexity of the task, so that in large and populous counties, where the county board has a multitude of duties, a special appointee may be installed.

The purchasing agent in cities is generally appointed by the mayor or manager. In "strong-mayor" cities, the mayor, responsible for administration, appoints individuals who will carry out his policies; and thus appoints the purchasing agent if purchasing is a separate department or unit. The same plan is followed in

manager-governed cities. Where purchasing is the function of an administrative board, generally appointed by the mayor, the purchasing agent owes his appointment to his administrative superiors.

The same principle of administrative control should follow where purchasing is a division of a department. The head of the department, of which purchasing is a part, is generally appointed by the chief administrator—the governor, mayor, or manager—and reports to him. The individual responsible for administration should be vested with authority over his division chiefs. The head of a purchasing division should, therefore, be appointed by the head of the department.

The exceptions to this rule are found in some of the states, counties, or cities which have civil service systems. The advantages of the merit system in government are too obvious for refutation, and the arguments for divorcing the administration of a purchasing office from political control are too numerous and potent to be gainsaid. Nevertheless, the theory of centralized responsibility demands that the administrative head of the government or the department should have the choice of the official upon whom he must depend for policy execution. Civil service regulations, in protecting government employees against the spoilsman, have sometimes made removal so difficult that the administrator finds his best intentions baffled by a department or division head over whom he has little control. On the other hand, the success of certain purchasing offices can be attributed to the security of tenure of the directing head in the midst of a spoils-ridden administration.

On what basis of qualifications should the purchasing agent be appointed? Certainly not on the basis of past service to a political party. All too frequently, zeal in preëlection campaigns has been rewarded by appointment to the office of purchasing agent as one of the political "plums." In one state, the campaign manager for the governor was made state purchasing agent. In purchasing, if in any office of government, the directing head should have no political debts to pay through the award of orders

and contracts. It would indeed be a miracle if a newly appointed purchasing agent, the late liaison agent of the successful political machine, should turn a deaf ear to the financial supporters of his campaign and award the state business on a strictly scientific basis.

For the same reasons, the purchasing agent should not be elected to his position. So far as known, this position is elective in only one government—Monroe County, New York. By the provisions of the law, the purchasing agent is elected every two years.[14] The natural temptation of the political party is to nominate a good vote-getter, irrespective of his qualifications for the office.

The purchasing agent should be selected only because of his technical qualifications and not because of his allegiance to a political party. Ability to deliver votes does not necessarily mean ability to purchase. True enough, a man of good business sense and high intelligence can learn the technique of purchasing after he takes office; but he should have acquired such knowledge before taking office. Prior experience in a private or public purchasing office is the prime essential. The purchasing agent should have a sound and practical business training. The law establishing centralized purchasing in Washington wisely provides that the state purchasing agent shall have had experience in commercial pursuits and in accounting prior to his appointment. The committee which recommended a purchasing system for Baltimore, in its report referred to above, outlined the following specifications for the selection of a purchasing agent: "Fitness and ability should be the sound basis and only consideration for, not only the original appointment, but for continuance in office. This should be based on:

(a) Thorough experience in the profession of purchasing.

(b) General reputation for honesty, fidelity and expressed ability in achievement.

(c) The appointee should be at least thirty years, and not over fifty years, of age.

[14] Chapter 309, laws of 1902.

(d) He should be capable of passing a first-class physical examination.

(e) He should be a man of known purchasing ability, and preferably familiar with the city of Baltimore." [15]

When the purchasing agent is appointed under civil service regulations, as is the case, for example, in the state of California, in Los Angeles County, and in five cities, the selection is based on oral and written examinations and personal interviews with the civil service commission or with the appointing authority. The examinations should be designed to determine the acquaintance of the applicant with the duties of the position and with the details of purchasing technique.[16] Written examinations are, however, generally unsatisfactory for filling positions in which personality is an essential requisite. For this reason, the written examination should always be supplemented by a personal interview in selecting a purchasing agent.

3. Tenure of office.—When the purchasing agent is appointed, his tenure of office is frequently the same as that of the official making the appointment. The appointment itself is usually for an indefinite tenure, but subject to the pleasure of the appointing officer. This means that the appointee is subject to removal at any time and may be supplanted upon a change of administration if not before. When the purchasing agent enters office under civil service regulations, he generally holds office until removed for cause and in the manner prescribed by law. But in some governments the purchasing agent is appointed for a definite term, rang-

[15] Some governments have sought the help of a local association of purchasing agents in finding a suitable appointee. For example, the city manager of Cleveland in 1927 asked the Cleveland Association of Purchasing Agents to recommend one of their own number or some qualified non-member for the position of city purchasing agent. The present incumbent in that position, a former president of the National Association of Purchasing Agents, was appointed by the city manager on the recommendation of the Cleveland Association, and was "loaned" by his former employer, a large industrial corporation of Cleveland, for such time as he is needed in the public service.

[16] Appendix C reprints the specifications outlined for the position of purchasing agent of Baltimore, and the examination questions for the position of purchasing agent of the borough president's office in Manhattan, New York City.

ing from one year to six years. The appointment is for one year in seven cities; for two years, in fourteen cities and four states; for three years, in two cities and four states; for four years, in fourteen cities and five states; for five years, in two states; and for six years, in one city and two states. The purchasing agent of Monroe County, New York, as noted above, is elected for a period of two years. The state purchasing agent of New York was formerly appointed by the governor for a term of four years, although the governor's term of office is only two years.

Continuity of tenure is of course highly desirable. Even the best qualified purchasing agent will find himself handicapped for a time by unfamiliarity with the workings of the government, and may not become orientated to his task for several months or a year. A short-term appointee may only be reaching the maximum of his efficiency when his term of office expires. The purchasing agent should be kept in office as long as he produces the desired results. This is possible even when the office is appointive. The purchasing agent of California has been in that office ever since it was created in 1915, has survived several changes of administration and changes in the structure of the government, and because of his thorough familiarity with the requirements of his position has continued to build up and to improve his system until today it stands second to none in the country. The purchasing ordinance for the city and county of San Francisco refers to the purchasing agent by name. The present incumbent has been in office since its establishment in 1923, and can be removed only by a change in ordinance.[17]

4. Salary.—Generally speaking, public purchasing agents receive much lower salaries than purchasing agents for private corporations. The average salary of public purchasing agents is about $3,600, while the average salaries of purchasing agents in private business is nearly $5,000. This represents false economy. A government cannot expect to secure an executive for a clerk's salary. The salary of the purchasing agent of Monroe County, New York, is established by law at $2,500. The city purchasing

[17] This ordinance is reprinted in full in Appendix B.

agent in Auburn, New York, receives an annual salary of $1,700; Schenectady, New York, $2,000; Watertown, New York, $1,500; and Yonkers, New York, $2,800. The state purchasing agent of Vermont receives only $3,000 per year. The purchasing agent of Saluda County, South Carolina, receives the munificent salary of $600 per year, "payable monthly." [18] Such salaries are not likely to attract the proper caliber of purchasing agent. One of two results is likely to follow: either the office will be filled by a clerk who cannot secure any higher salary elsewhere, or an ambitious purchasing agent will be tempted to supplement his salary by outside work or by "graft" in connection with orders.

The purchasing agent should be paid a salary high enough to attract a man of proper qualifications. A qualified incumbent should not be penalized because he is a public servant.

Fortunately, the trend is decidedly in the direction of higher salaries. The purchasing agent in Milwaukee receives an annual salary of $4,000; in the state of Arizona, $4,800; in the states of New Jersey and Montana, $5,000; in Los Angeles County, $5,400; in the state of Pennsylvania, $8,000; in the city of Detroit, $10,000; in the city and county of San Francisco, $10,000; and in the city of New York (department of purchase), $12,000.

The salary of the purchasing agent should not be established by law, but should be left to the discretion of the budget-making authority from year to year. If stated in the law, the salary cannot be raised to keep pace with the trend of salary increases, without reënactment, which is a slow and laborious process.

5. Bond.—Some purchasing agents are required to give a bond, payable to the employing government, as a safeguard against defalcation of funds or other malfeasance in office. The premium of the bond is usually paid from the public treasury. The amount of such bond varies: in the states of Oklahoma and Texas it is established at $50,000; in the city and county of San Francisco, $20,000; in the state of California, $25,000; and in the state of Montana, $10,000.

[18] Laws of 1927, chapter 165.

Subordinate Personnel.—The number and character of the subordinate personnel depend upon the size of the purchasing office. Next in importance to the head of the office is the assistant purchasing agent. This position is found in all the larger purchasing organizations, and sometimes more than one assistantship is maintained. In the large office, the assistant purchasing agent is actively in charge of the purchasing routine and sometimes is the immediate supervisor of the office force. The assistant in the small organization often acts as order and invoice clerk or storekeeper, while in the large office his time may be entirely taken up by administrative duties. In the large organization the purchasing agent must rely upon the assistant to carry out the purchasing policy; in his own hands the assistant may hold the key to the success of the office.

If the purchases of equipment, machinery, and technical equipment are large, an engineer should be employed as a special assistant purchasing agent. Such assistant could also have charge, or assist in the formulation, of specifications and could supervise the inspection of deliveries of engineering and other technical commodities.

The assistant purchasing agent, like all other subordinates, is appointed under civil service regulations in all governments which follow the merit system. If a civil service system is lacking, the assistant and the other employees are generally appointed by the head of the office.

There are some arguments in favor of the appointment of subordinates by the purchasing agent. He, like his own immediate superior, must have a loyal and efficient force if he is to show satisfactory results. His assistant might well be, therefore, a man of his own choosing. On the other hand, efficiency may possibly be lessened by close friendship between the office head and the rank and file of the staff. An employee who is appointed on the basis of friendship will often exert himself less than will a stranger.

Continuity in office is especially desirable for those who carry out the purchasing routine, since experience here is essential for

rapid and accurate work. Civil service regulations are a protection against a change of personnel with a change of purchasing agent, which is to be avoided wherever possible. Civil servants are, as a class, faithful and loyal and will render proper service to their directing head if he does his part in treating them fairly and in trying to instill the proper morale in the office.

Next in importance to the assistant purchasing agent is the buyer. The buyer is generally a specialist, who is selected on account of his familiarity with a given commodity line. Large offices, as shown later in this chapter, often have several buyers, each of whom is in charge of interviewing salesmen, examining samples, and sometimes inspecting deliveries, of one or more classes of commodities. One buyer may handle the purchases of textiles; another, meats and groceries; a third, office supplies and equipment; and so on. The buyer should know the markets and the price trends in his field, and should be an excellent judge of quality. He, like the purchasing agent, should know the precise needs of the various using departments, and should have time to acquire such information by first-hand visits and inspections.[19]

If a corps of inspectors is attached to the purchasing office, they should also be carefully selected on the basis of merit. The inspector, like the buyer, should be a good judge of quality. He should work as closely as possible with the buyer. He should know at all times the specifications and the sample upon which the order is awarded, and the quality of delivery which is expected, so that he can pass upon the delivery with intelligence.

The other employees of a purchasing office, such as stores clerks, invoice and order clerks, record clerks, traffic clerks, and stenographers, fill routine and clerical positions requiring little if any prior technical training. They can acquire familiarity with their work by a limited experience. Since they seldom occupy

[19] Appendix C reprints examination questions used for the selection of the assistant purchasing agent in the state of New York and the city of Baltimore, and for a buyer in Cleveland. The procedure followed in devising the examination questions for assistant purchasing agent of Baltimore and in grading the papers is discussed by Walter N. Kirkman, state purchasing agent of Maryland, in *The Purchasing Agent*, July, 1927, p. 751, 752, and 795.

positions requiring administrative ability or the exercise of judgment, they can be selected by written examination or personal interview.

The Equipment of a Purchasing Office

A few public purchasing offices are still compelled, in the interest of so-called economy, to write all orders in longhand, to make their office copies of letters in the old-fashioned letterpress, and to use wooden boxes for filing cases. By these methods, the government loses in added operating cost and in lessened efficiency. The purchasing office should be allowed sufficient appropriations to provide up-to-date writing and filing equipment and suitable office furniture. The Library Bureau, Kardex-Rand, and other leading manufacturers of office equipment, supply forms and equipment especially designed for use in a purchasing office.

The keeping of complete and adequate records is one of the most important functions of a purchasing office. One of the outstanding benefits of centralized purchasing should be the compilation of accurate data on consumption trends and expenditures for *matériel* by each operating unit of the government; such records may be of inestimable help to the budget-making officials in planning future expenditures. The scope and nature of such records vary with the size of the government, but certain data should always be maintained in readily accessible form. The record files should contain part or all of the following data: supply sources, records of purchases, price records, specifications, invoices payable, outstanding orders, inspection reports, and stock inventory, in addition to general correspondence. Some of these data may be combined in permanent records of purchases, as explained in later chapters.

To assist the buyers in maintaining a complete record of supply sources, the purchasing office should have copies of the leading directories of manufacturers and suppliers, such as Thomas's, Hendrick's, McRae's, Sweet's, and *The Municipal Index*. A complete file of trade catalogues and circulars should be maintained.

Catalogue filing, however, is most difficult because of the variety of sizes. This makes it almost impossible to file catalogues according to commodity groups. They can sometimes be filed according to vendors because all catalogues issued by one company are frequently of one size. Under present conditions, the best plan is to file catalogues according to size, to number them according to some classification scheme, and to maintain a card index, in which the catalogues are listed by vendors and cross indexed by commodities. The National Association of Purchasing Agents initiated a movement some years ago for the adoption of a standard catalogue size. Although this commendable movement has the backing of the United States Department of Commerce, engineers, architects, purchasing agents, and other groups, it will probably be many years before its objective is reached.

The purchasing agent should be permitted to subscribe at public expense to the leading trade magazines covering the commodity lines in which he and his buyers are chiefly interested. He should subscribe to *The Purchasing Agent*, which records from month to month the latest improved methods of scientific buying. The purchasing office should also subscribe to Dun's or Bradstreet's services, which are reliable guides to the financial status of firms seeking to do business with the government. To plan the buying program scientifically, the purchasing office should also receive regularly one or more of the commodity services which forecast market trends and conditions, such as the Babson Statistical Organization, Brookmire Economic Service, Standard Statistics, or McGill Commodity Service.[20] The *Survey of Current Business*, issued by the United States Department of Commerce, is also a valuable aid in this connection.

The purchasing agent and his buying staff should also be permitted to maintain, at public expense, memberships in a local association and in the National Association of Purchasing Agents. Contacts with other buyers for interchange of methods cannot

[20] The library and literature needed by an efficient purchasing office is discussed by Joseph E. Mills, commissioner of supplies, city of Detroit, in *The Purchasing Agent*, July, 1927, pp. 729-733 and 820, 821.

fail to increase their efficiency. The National Association maintains for public buyers a special group, with its own organization and special work program. The Association has been one of the most powerful influences in the standardization of office forms and in the simplification of commodity production; it sponsors courses of training for the higher education of purchasing agents; it has exerted a tremendous influence for the divorcement of politics from public buying; and it has played a leading rôle in the elimination of commercial bribery from purchasing, having adopted a code of "Principles and Standards" to which each member is expected to adhere. The cost of membership in this powerful organization of buyers is a sound investment of public funds.

Division of Work in a Purchasing Office

To give an accurate and complete description of a typical purchasing office, with the job specifications of each staff member, is impossible on account of the widely varying types of existing organizations. The division of work in a purchasing office is best illustrated by typical organization charts. The charts shown below are admittedly adapted to large organizations; but the principles of administration and the lines of responsibility may be applied, *mutatis mutandis,* to the "one- or two-man office."

Figure 1 shows the organization of the purchasing office of Los Angeles County, California. The purchasing agent and manager of stores is appointed by the board of supervisors, and is responsible for the conduct of the entire office. The office has two main divisions—purchasing and stores—each in charge of an assistant. In the purchasing division, the chief clerk is in charge of the clerical force. The purchasing division has five buyers, called assistant purchasing agents, each of whom is in charge of purchasing certain commodity lines. It is to be noted that the buyer of meat is also the meat inspector.

The checking of requisitions and invoices, the follow-up of orders, and the inspection of deliveries are functions of the stores division. Los Angeles County maintains seven storerooms, all of

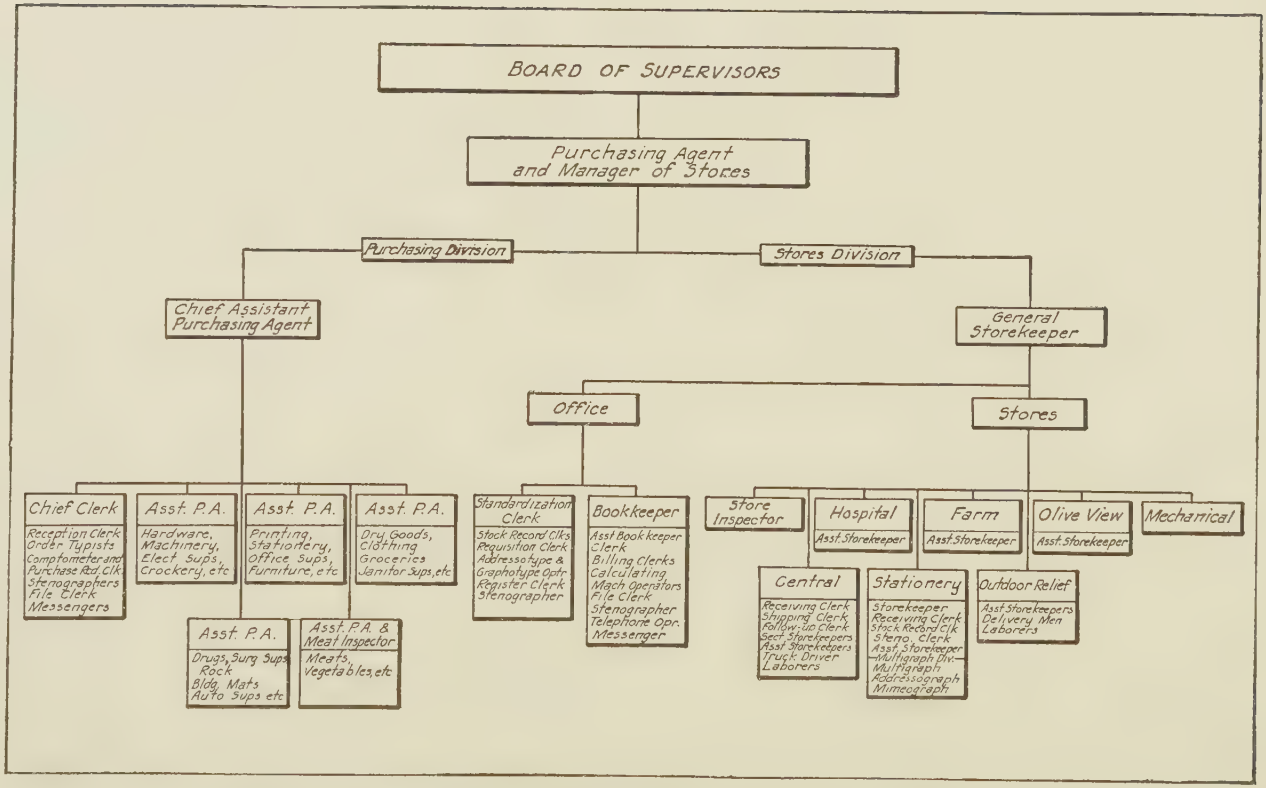


FIG. I. OFFICE ORGANIZATION, PURCHASING AND STORES DEPARTMENT, LOS ANGELES COUNTY, CALIFORNIA

which are subject to central supervision and inspection by the store inspector, who reports to the general storekeeper. The central storeroom is the delivery point for many orders, which, after inspection, are delivered by truck to the branch stores or to the using departments. The stationery storeroom has a multigraph division, with four employees engaged in multigraphing or mimeographing the specifications, notices of pending purchases, and routine forms and stationery needed by the entire department.

The office has a staff of ninety-four which, during 1927, purchased, stored, and distributed *matériel* costing over six and one-half million dollars. The 1927 budget of the office for salaries and expenses was $144,272. The purchasing agent and his entire staff are under civil service regulations. The number of the staff and the salary of each employee are fixed by the board of supervisors in a salary ordinance adopted at the beginning of each fiscal year. The salary schedules are prepared by the civil service commission and the bureau of budget and efficiency, subject to change and adoption by the board of supervisors.[21]

Figure 2 shows the organization of the purchasing department of Milwaukee. The department is under the supervision of the central board of purchases, composed of certain members of the city council and heads of certain departments, or their designated representatives. The office is administered by the purchasing agent who is also secretary to the board. The organization has four work divisions—general office, storehouse, multigraph, and gasoline and oil—all of which are supervised jointly by the purchasing agent and his assistant. Two employees operate the storehouse. Two members of the gasoline and oil division have charge of the storage and delivery station serving all municipally owned motor equipment. The chart outlines the duties attaching to each position. This office is very capably administered. With a staff of fifteen and a budget of $38,000 for salaries and overhead expenses, it purchases for all the using agencies of the city,

[21] The title and salary of each staff member, as fixed by the salary ordinance for the fiscal year 1927-1928, are reprinted in Appendix D.

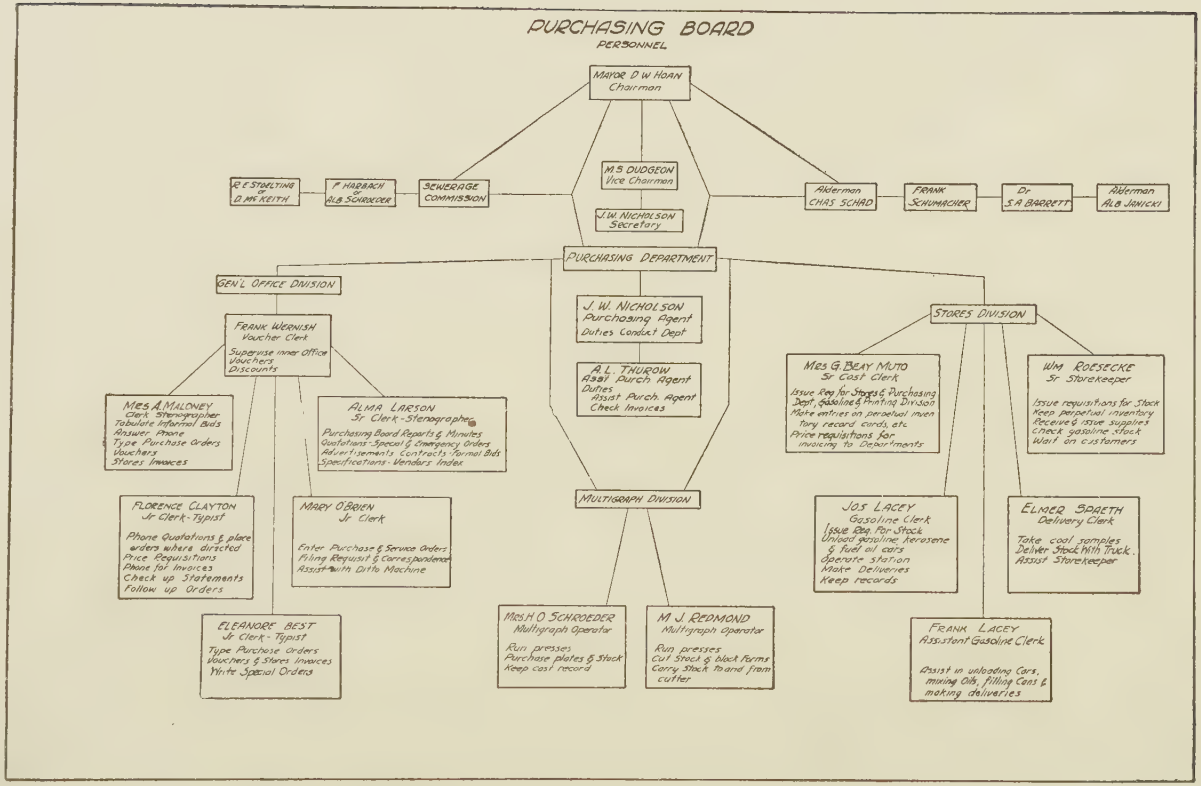


FIG. 2. OFFICE ORGANIZATION, CENTRAL BOARD OF PURCHASES, MILWAUKEE, WISCONSIN

including schools, whose combined supply requirements in 1927 totaled $5,000,000.

The organization of the Detroit purchasing office is shown in Figure 3 The purchasing agent (commissioner of purchases and supplies) is appointed by the mayor, with consent of the council. The secretary of the department corresponds to the assistant purchasing agent elsewhere; he is actively in charge of the detailed work of the various divisions. Detroit has a traffic division, which is rarely found in public purchasing offices; the checking of traffic charges is generally entrusted to the invoice clerks. The office has a staff of thirty-three. During 1927 the department purchased commodities totaling over $12,000,000, at a cost of $97,000 for salaries and expenses.[22] It does not handle school purchases, nor supervise the storage and distribution of supplies, which is a function of the individual using branches. However, it purchases for the street railway system and other municipally owned public utilities.

The organization of the department of purchase of New York City is illustrated by Figure 4. The head of the department is appointed by the mayor. The office has divisions for inspection, contract execution, purchasing (open market orders), general office routine, statistics, and testing. The staff of the department numbers one hundred, with an annual budget for salaries of approximately $250,000. The department is top-heavy with "executive positions" (shown above the horizontal line), whose incumbents have only limited supervisory or administrative duties. If some of these positions were abolished and their salaries were distributed among the rank and file of the staff, some of whom are underpaid, the department would probably function with increased efficiency. The department is responsible for less than 40 per cent of the city's total purchases. This staff is large enough to handle the bulk of the commodities needed by all the city and

[22] The 1927 budget of the Detroit purchasing office, showing the salary paid each staff member, is reprinted in Appendix D.

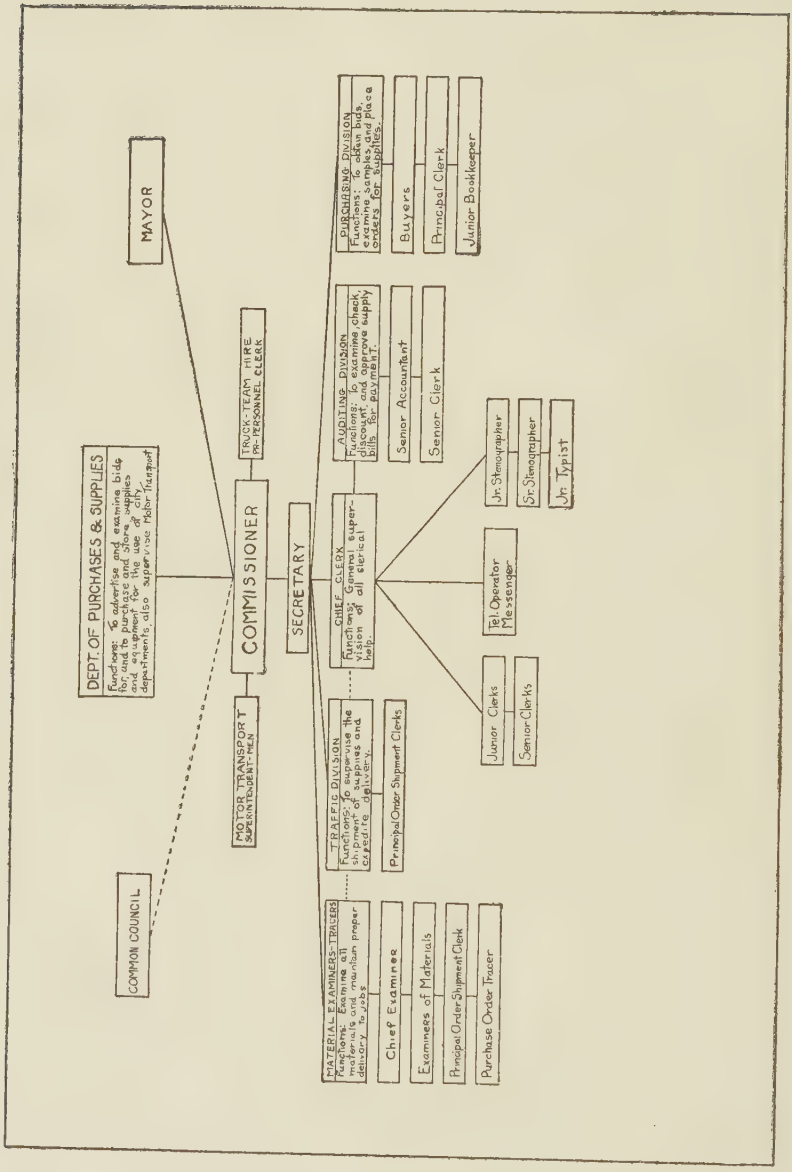


FIG. 3. OFFICE ORGANIZATION, DEPARTMENT OF PURCHASES AND SUPPLIES, DETROIT, MICHIGAN

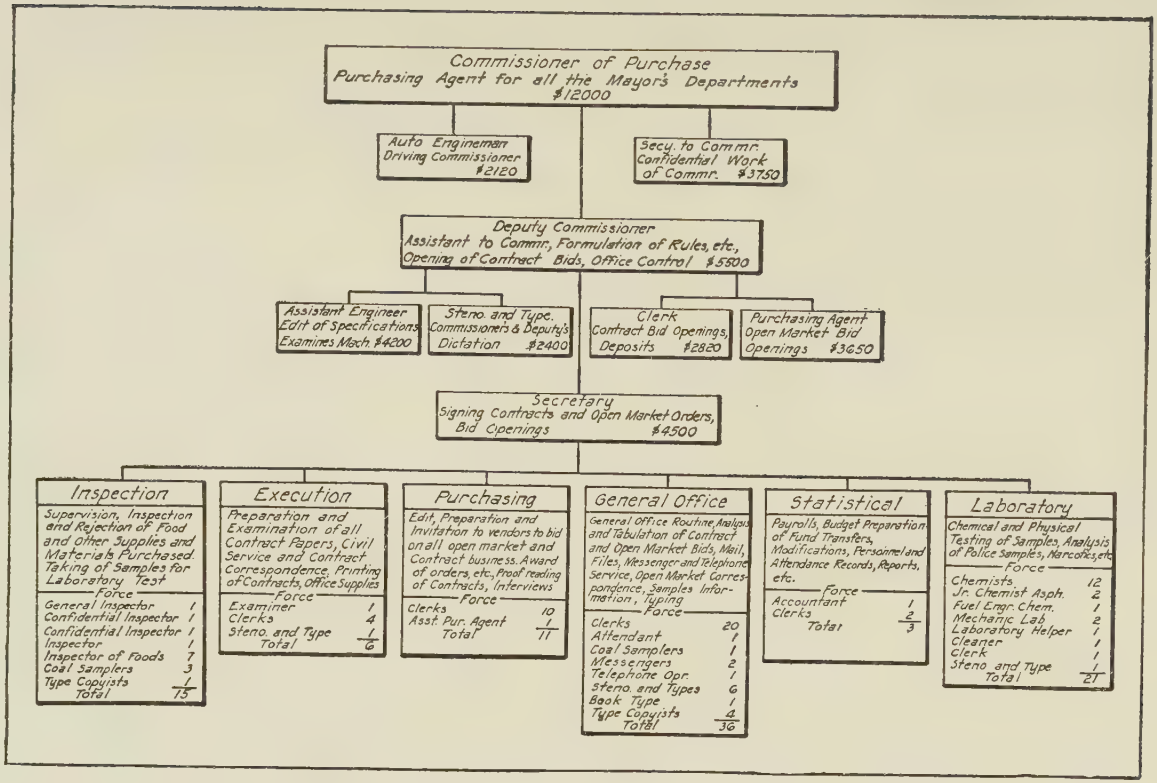


FIG. 4. OFFICE ORGANIZATION, DEPARTMENT OF PURCHASE, NEW YORK CITY

county offices, exclusive of the department of education, without substantial increases in personnel.[23]

Operating Cost

To determine the operating cost of purchasing offices, a questionnaire was sent out by the writer in 1926, under the auspices of *The Purchasing Agent* magazine, asking for data on the work of the last preceding fiscal year. Those replies which were complete are summarized below in Table VII. Although the list covers only a small proportion of all governments which have centralized purchasing, it is sufficiently comprehensive to serve as a general index to the percentage cost of purchasing and the percentage of the total commodity requirements which are purchased through the central office. Cost data are given on purchasing offices ranging in size from some of the largest in the country to the "one-man" office where the purchasing agent performs the entire function, even without stenographic assistance.

It is conceded that the percentage cost of purchasing bears little relationship to the efficiency of administration. The overhead cost of issuing one order for $5 is often as much as for an order or contract amounting to $5,000. If the purchasing procedure does not permit the purchasing official to determine the total estimated requirements of all using offices for a given future period, but instead compels him to order in driblets and dabs as requisitions are submitted, the number of orders and contracts issued per year may be high; the overhead cost for receiving bids, preparing and issuing the orders, and checking the invoices will be correspondingly increased. Consequently, the percentage cost of such purchasing will appear much higher than in a system where the aggregate requirements of all using offices are pooled in large expenditures. Sometimes this situation is traceable to a lack of initiative by the purchasing official; more frequently, however, it is a defect of the law for which the purchasing agent has no recourse.

[23] Appendix D also shows the list of employees, and the title and function of each, in the California state purchasing office.

Table VII shows conclusively that purchasing for governments is conducted economically. The average cost of approximately one per cent shown below compares favorably with the average purchasing cost in private corporations, estimated by L. F. Boffey, editor of *The Purchasing Agent*, as three-quarters of one per cent.[24] The average cost of public purchasing is naturally somewhat higher than the purchasing cost for private corporations, because governments are required to advertise pending purchases, to solicit wide competition, and to conform to other legal requirements which are to be discussed in subsequent chapters.

The Purchasing Procedure Outlined

Purchasing systems in government today present an almost endless variety of procedure. Here we shall outline briefly the essential steps in purchasing, most of which are found in up-to-date systems.

The purchasing agent should have access to the detailed estimates of requirements filed by each spending agency at the beginning of the budget-making period, after such estimates have been revised by the budget-making authority. These estimates furnish a preview of the buying program for the budget year. Some commodities, such as coal, gasoline, and automotive equipment, can be purchased on a yearly contract basis, in definite or estimated quantities, with a consequent reduction in unit cost. Other commodities, such as groceries and meats, often fluctuate in price so that contracts and orders should not cover more than quarterly or monthly periods. All the estimates may be consolidated to determine the total prospective purchases, and may be distributed according to the classification of commodities previously established. The quality of the commodities to be purchased should be determined by standard specifications previously adopted. If the list of estimated requirements contains new commodities, standard specifications may then be set up, in accordance with established routine, to govern future purchases.

Even though contracts cover a quarterly or yearly period,

[24] Letter to the writer dated March 9, 1928.

TABLE VII

Operating Costs and Amounts Purchased by Representative Public Purchasing Offices

Name of Government	*Total Annual Expenditures Through Central Purchasing Office*	*Percentage of Total Supply Budget Spent Through Central Purchasing Office*	*Cost of Purchasing*			
			Salaries	*Office Supplies Etc.*	*Total*	*Per Cent Cost of Purchasing*
States						
Maryland	$ 1,375,000[1]	91%	$20,760	$ 3,775	$24,535	1.67
New Jersey	4,950,000[1]	25[2]	51,628	15,060	66,688	1.3
Massachusetts	10,000,000	45	55,000	10,000	65,000	.65
South Dakota	2,000,000		3,000	1,500	4,500[3]	.22
Counties						
Fresno County, Calif...	1,102,000	39	7,785	1,688	9,473	.86
Marin County, Calif. ..	202,000	68	2,400	112	2,512	1.4
Santa Cruz Co., Calif...	310,000	47	3,600	1,936	5,536	1.7
Erie County, N. Y.	3,000,000		20,300	4,562	24,862	.8
Oneida County, N. Y. ..	159,000		8,500	494	6,994	4.4
Onondaga County, N. Y.	696,000		10,300	1,000	11,300	1.6
Kent County, Mich. ...	706,000		4,500	215	4,715	.6
Cities						
San Diego, Calif.	345,000		17,000	3,138	20,138	.75
Sacramento, Calif.	280,000		5,400	700	6,100	2.2
New London, Conn. ..	435,600	100[4]	3,084	378	3,462	.79

Washington, D. C.	3,873,000	100[4]	65,085[5]	3,607	68,692	1.7
Bloomington, Ill.	350,000		1,800[6]	1,000	2,800	.8
Davenport, Iowa	233,000		3,000	465	3,465	1.5
Portland, Maine	2,000,000	44	4,636	1,269	5,905	.3
Waltham, Mass.	225,000	75	3,000	350	3,350	1.4
Kalamazoo, Mich.	587,000		7,900	1,365	9,265	1.5
Muskegon, Mich.	243,000	48	1,200	825	2,025	.8
Kansas City, Mo.	1,500,000	60	9,400	1,500	10,900	.7
Camden, N. J.	623,000		10,200	169	10,369	1.6
Rochester, N. Y.	2,019,000	63	5,529	4,659	10,188	.5
Columbus, Ohio	1,042,000		9,105	638	9,743	.9
Astoria, Oregon	125,000		600[7]	300	900	.7
Dallas, Texas	741,000		8,040	994	9,034	1.2
Lynchburg, Va.	280,000		2,820	1,380	4,200	1.5
Kenosha, Wis.	262,000		2,940	237	3,177	1.2
Milwaukee, Wis.	5,265,000	100[4]	27,310[5]	11,205	38,515	.72
Totals	$44,928,000				$448,343	
Average per cent cost of purchasing						.99%

[1] Includes purchases for educational institutions, but does not include purchases for state highways. The latter are often financed from bond issues which are not included in the annual supply budget.

[2] Estimated by Joint Legislative Survey Committee of New Jersey in report of September 10, 1925.

[3] Purchasing is a division of the finance department. Total expenses are apportioned among the divisions.

[4] Central purchasing office buys all school supplies.

[5] Includes staff engaged in storage and distribution.

[6] Commissioner of public works acts as purchasing agent, and allocates only a part of his salary to purchasing.

[7] City manager acts as purchasing agent, and allocates only a part of his salary to purchasing.

deliveries are frequently postponed until the goods are actually needed. The need is indicated by a requisition filed with the purchasing agent, or with the storekeeper if a central storehouse has been established. If the goods requisitioned are not in stock, the storekeeper notifies the purchasing agent who in turn issues a new order or requests delivery on the existing contract. In some cases, all requisitions come to the purchasing agent, who keeps a record of stocks on hand, and authorizes delivery from the storeroom or from the supplier.

Most purchasing systems require newspaper advertisement for bids on pending purchases if they exceed a certain maximum amount, usually $500 or $1,000, but such procedure can be waived in an emergency. If the amount of the purchase is less than this maximum, it may be bought on the open market without formal newspaper advertising. Competitive bids are generally required on all orders wherever competition is possible. Bids are usually solicited also by direct request to prospective suppliers and sometimes also by posting a list of pending purchases upon a bulletin board in the purchasing office. On large orders or contracts, especially those for construction projects, the vendor is required to accompany his bid with a bond, certified check, or cash for a certain established percentage of the expenditure, as an evidence of good faith and a guarantee of satisfactory delivery or performance of the contract. All bids are usually opened and recorded in public at a previously designated hour, and the order or contract is awarded to the lowest and best bidder.

The purchase order is made out in several copies, four usually being sufficient. The order or contract should not be issued until the accounting officer has certified that the balance of the appropriations concerned is sufficient to pay the vendor's claim when submitted. In some systems, this procedure takes place when the requisition is received; but for the reasons explained below this accounting record should be made when the order or contract is ready to be issued.[25]

The vendor then makes delivery, sending an invoice to the

[25] See pp. 282, 283.

purchasing agent. When goods are received, they are checked by the receiving or inspecting official, who notifies the purchasing agent that delivery is satisfactory. This notice, made on a form generally called "advice of goods received," is the purchasing agent's guide in checking the invoice. When checked for quality and quantity of delivery, and for price extensions, against the advice of goods received, and against the office copy of the purchase order, respectively, the invoice is sent to the accounting office for recheck. If the invoice is approved by the accounting office, the treasurer is authorized to issue warrant in payment.[26]

The procedure outlined above will be discussed in detail in the following chapters. The next chapter is devoted to discussion of standardization and the formulation and adoption of specifications.

[26] The procedure of purchasing is well outlined in Buck, *Municipal Finance*, pp. 270-274.

CHAPTER V

STANDARDIZATION

STANDARDIZATION has been defined as *"the setting up of standards* by which extent, quantity, quality, value, performance, or service, may be judged or determined. It is the crystallization of the best thought and practice of industry, business, or art into definite forms for general usage." [1] Although essential to scientific public purchasing, standardization is seldom favored or understood by the using agencies of the average government, and very rarely followed as a rule of practice.

Standardization is accepted as a matter of course in most private corporations, especially in manufacturing establishments, which are compelled by competition to eliminate the nonessential supply requirements and to select those raw materials which will insure a product of the highest possible quality at the lowest possible cost.

Government, on the other hand, is a noncompetitive, nonprofit-making business, with no product except "service." But, as pointed out in Chapter I, the quality of the supplies, materials, and equipment used and the method of their procurement have a very direct bearing upon the quality, amount, and cost of public service. As long as several departments of a government are buying separately in small lots supplies which are almost identical and which could be purchased for their combined requirements at lower costs, all such departments are restricting their own service program and reducing the efficiency of the government as a whole. Standardization, instead of crippling the operating efficiency of a government as its opponents claim, can be the means for providing sup-

[1] Harriman, *Standards and Standardization, p.* 78.

plies, materials, and equipment of identical or higher quality at lower unit cost.

Without standardization, centralized purchasing falls short of its intended function. Unless the requirements of various agencies can be consolidated, centralized purchasing results only in the placing of many small orders through a central office. As long as each branch of the government continues to receive its own particular choice of brand, quality, or design, which may differ only slightly from the choice of other using agencies, it is impossible to reduce unit costs through bulk orders.

It is conceded that all commodities used by a government cannot be standardized. Almost every branch of a government uses certain articles which are used by no other and which are necessary to its particular work program. But frequently the various divisions and bureaus within a department have many common *matériel* needs. In such cases, "one-unit" standards can be established to apply only to that specific department. Intradepartmental standardization is often as important as interdepartmental standardization. To attempt standardization of the books in the public library, for example, would be nothing short of ridiculous. The public hospital may require for its dietary kitchen a higher quality of certain foods than is required by other institutions supported from public funds. All highly specialized and technical commodities should be purchased without attempt to standardize, since the consequences of substitution in quality or brand may far outweigh the potential saving.

The Advantages of Standardization.—Every public corporation, however, consumes many staple articles that can and should be standardized. Such commodities as coal, automobile tires and tubes, lubricating oil, textiles, office equipment, furniture, etc. are available in almost identical qualities from many competitive suppliers. By establishing standards of quality and performance in these and many other such staples, a government can consolidate the requirements of the various using agencies into large orders, go into the market as a big buyer, and reduce the unit costs through increased competition. As long as each using agency

requisitions a particular brand of automobile tire, for instance, the central buying office cannot secure competition and may have to pay the regular retail price on the small-quantity order. This is unnecessary and inexcusable.

The establishment of standards has certain other important advantages besides price reduction. When the government places large orders, it is likely to secure better delivery service from the suppliers. Quicker delivery facilities reduce the need for carrying large stocks on hand, and lower stocks mean less investment and less overhead cost. Standardization also reduces the number of items to be carried in stock and permits larger quantities of each item to be kept on hand without increase in storage space. Ample stocks lead to a reduction in the number of emergency purchases, which are usually for small quantities at higher unit prices. Standardization simplifies the work of inspection, auditing, and accounting, since the number, respectively, of deliveries, invoices, and stock and property accounts is correspondingly decreased. A standard item of supply is also less likely to become obsolete. If definite standards of quality and performance have been agreed upon and have been approved through use, a change in administration is less likely to result in supply policy changes which may make the stocks on hand practically of no value. A stock in a standard article, no longer needed by one using branch, can be transferred to another with a minimum of delay and loss. All these advantages of standardization tend to lower the cost, both of purchasing and of the commodities purchased.

Disadvantages of Standardization.—A program of standardization, unless wisely administered, may involve certain disadvantages. Sometimes a standard is considered immutable. Unless standards are subject to change at any time, their adoption will stifle new ideas and discourage research and investigation. The official or group responsible for standardization must have open, receptive minds, and welcome improvements in standards at all times. "The idea of perfection is not involved in standardiza-

tion." [2] Then, too, specifications which are too rigid and too detailed may involve considerable "red tape" which imposes a burden on the public administrator. Using agencies, especially the field services, of the federal government are often put to considerable inconvenience in securing exemption from use of certain federal specifications which are found inadaptable to their requirements. A standardization program, to be successful, must be flexible and tempered with an abundance of common sense.

The Standardization Process.—Standardization is usually accomplished through two closely related steps: simplification and the formulation of specifications.

1. Simplification.—Simplification is the reduction of brands, qualities, sizes, or designs of *matériel* to the smallest number consistent with successful operation. It has been popularized by Secretary Herbert Hoover, who established a division of simplified practice in the Department of Commerce in 1922. This division has already simplified the production and distribution of several lines of commodities widely used in government.

A simplification project begins with a survey of existing practices by a committee or group representing one branch of an industry, usually the producers. Such a survey in most cases shows that a few varieties and styles constitute the bulk of the business in that industry, while many other varieties and styles, called for only occasionally, could be eliminated. The division of simplified practice then calls a conference of producers, distributors, and consumers to decide upon a simplified schedule. All branches of the industry are then asked to accept in writing the simplified schedule as adopted. When written acceptances have been received from 80 per cent of the producing, distributing, and consuming interests, the simplification project is published in the *Elimination of Waste Series* of the Department of Commerce. Each simplification project is subject to annual review and revision.

The first and most famous project was the simplification of

[2] Harriman, *op. cit.*, p. 79.

paving brick. The first conference reduced the production of paving brick from sixty-six to six varieties. Of the six simplified sizes and styles, two others have been found unnecessary and have been eliminated by subsequent revision conferences. The buyer of paving brick is now concerned with four varieties instead of the sixty-six which were produced and distributed before 1922. The estimated saving to the paving brick industry is $1,000,000 per year. Other projects affecting government purchases have been the simplification of lumber, beds, paper, blanket sizes, and reinforcing bars for concrete. The simplification of bed sizes had the support of the American Hospital Association, whose committee on general furnishings and supplies recommended that the variety in sizes of hospital beds be reduced from several hundred to one as the standard.

Simplification of government purchases is concerned solely with limiting the consumption to the essential varieties. It is the adoption of standards for use by the various units within a department or by various departments. Forty different brands of lubricating oil were used by the municipally owned motor equipment of Milwaukee in 1923. It was found that only five different *grades* of lubricating oil were needed, and these grades are now purchased in tank-car lots. The bureau of standards of New York state found in 1922 that seventy-five different brands of soap and cleaning materials were in use in the state institutions and departments. After a thorough and careful study of requirements, the number was reduced to ten.

2. *The Formulation of Specifications.*—"Specifications are the formulated, definite and complete statements of what the buyer requires of the seller." [3] In the standardization process, the specification is the written description of the "types, designs, materials, or practices" which survive simplification and are agreed upon as the standards. A specification is not limited, of course, to the description of standards; it is an integral part of every purchase order or contract, "specifying" what is to be furnished by the

[3] Secretary Herbert Hoover, in foreword to *The National Directory of Commodity Specifications.*

seller, "in the way of composition, construction, utility, durability, efficiency, texture, shape, form or dimension." [4] The preparation and use of commodity specifications are essential to the enforcement of standardization. The specification is the medium for expressing the standard so that it may be clearly understood by the seller, the buyer, the inspector, and the user.

The use of specifications makes real competition possible. All bidders thus speak the same language. Without a definite specification, the supplier is unable to bid intelligently and the purchaser has no basis for an intelligent comparison of bids. The specification thus protects both the seller and the buyer; the latter can tell the prospective bidders precisely what is required; the former does not bid in the dark, being fully informed of what he will be expected to furnish. The seller need not consume his own and the buyer's time in seeking additional information concerning the goods required. If the written description is inadequate and must be supplemented by verbal description, the buyer may vary his verbal instruction to different dealers, thus perhaps discriminating against one in favor of another. If a definite specification is used, the seller need not thus rely upon his personal knowledge of the requirements of the government or bid with insufficient knowledge. Furthermore, purchase by specification is to be preferred, wherever possible, to purchase by samples. By the latter method, each bidder's sample must be considered separately and the confusion of comparing samples with price quotations sometimes increases the difficulty of determining the lowest and best bidder. In many cases, however, samples of the goods purchased are necessary for intelligent inspection and testing of deliveries.

Without definite and clearly formulated specifications, the government must resort very frequently to "trade-mark buying." In the absence of a technical description, the order may specify a well-known trade brand "or its equivalent." Bids are then submitted and the order is awarded on this basis. This opens the door to substitution of inferior quality, for neither party can definitely prove what *is* the "equivalent." Buying on the basis of

[4] Chase and Schlink, *Your Money's Worth*, p. 185.

quality and performance often shows that the highest priced article or trade brand is not the most serviceable. If tests show that a cheaper article will meet its need, the government can save the difference in price with no decrease in operating efficiency. Lacking definite quality specifications and methods of test, the government often protects itself by buying the highest priced article, in the faith that high price is a guarantee of quality. "For certain uses, the Society of Automotive Engineers reported that lubricating oil costing twenty cents a gallon was as good as oil at $1.35. It met the specification, and the purpose, at one-seventh the cost. Tests show that certain hardware in ten-cent stores has just as good steel as hardware in stores where the price is two or three times as much." [5]

Not all commodities can be purchased on detailed specifications. The formulation of detailed specifications may be a waste of effort when patented articles with a single supply source, or repair parts for machinery, are to be procured. Some government buying agencies spend considerable effort in formulating "limited" specifications, which restrict the competition of the article to be purchased to one, two, or perhaps three selected suppliers. It is a common practice to solicit bids for motor trucks, for example, on detailed and elaborate specifications which can be met by only two or three producers. Such procedure is necessary to comply with the law; but it would be more sensible and less laborious to ask for bids on the trucks by specifying the trade names only. Then, too, certain qualities cannot be specified by written description. It is highly difficult, for instance, to specify the desired aroma of a cigar, or the taste of coffee, or the flavor of cheese. Samples of such commodities must be received with the bids and tested, and the order awarded on the basis of the test.

The formulation of specifications is a technical task, requiring the combined services of the chemist, the engineer, the buyer, and the user. It is by no means a one-man job, for no individual is qualified to pass judgment on the quality or performance require-

[5] Chase and Schlink, "A Few Billions for Consumers," *The New Republic*, December 30, 1925, p. 155.

ments of an entire government. Specifications should be prepared jointly and cooperatively by representatives of all government branches concerned—the engineer and chemist, the using agencies, and the central purchasing office. Specifications already adopted by certain using agencies, by other governments, and by private corporations should be studied. Samples of the qualities or brands preferred by the various branches of the government and samples of other available commercial substitutes should be secured and, wherever possible, tried out under actual working conditions. Two or three alternative specifications may be adopted tentatively, and may be referred to the various producers of the given commodity for criticism and comment. Samples and prices may be solicited on each tentative specification for comparative purposes. The specification should not be adopted as final until after a trial period. The final form may be one of the tentative forms or a compromise combination of all.

The specification should be couched in clear and unmistakable language. It should inform the seller precisely what the government wants and what it expects him to deliver; it should tell the inspector or tester what has been purchased so that he can determine definitely whether the delivery conforms to the order. Vague and meaningless statements, such as "only the highest grade of materials will be accepted," should be avoided. The classic blunder in this respect was the specification for leather belting which required the use of steer hides, when in fact the sex of the animal cannot be determined from a sample of the finished product. Hundreds of specifications, painstakingly formulated, have thus been made nugatory through inaccurate phraseology. Countless disputes and litigations between the buyer and seller might have been avoided in the past had the order or contract left no room for doubt concerning the obligations of each party.

On the other hand, the specification should not be too drastic or rigid. "Unnecessarily severe requirements react to the disadvantage of both the producer and the consumer, for they are likely to interfere with production, increase the cost, and delay ship-

ments."[6] The specification should be broad enough to permit as wide competition as possible and should provide for reasonable tolerances. No economy results from the use of a specification requiring an article of special manufacture if an article of comparable quality and service is regularly produced for the commercial trade and is therefore available for prompt delivery. Governments sometimes err in interpreting their specifications too rigidly. Suppliers sometimes shun business with the government because of its penalties or rejection of deliveries for the slightest departure from the specified standard.

Voluminous and highly technical specifications should also be avoided. Competition is often discouraged by the use of high-sounding technical terms. Some suppliers lack the facilities for testing their products to determine whether they meet the government specification. The government, too, is at a disadvantage unless it has ample facilities for enforcing conformance to specification by scientific tests.

The emphasis in purchasing has been shifted from price to quality and service. The emphasis in specifications should therefore, whenever possible, be upon performance rather than upon chemical composition or the method of manufacture. The use to which the article will be put and the test of its usefulness should be described, so that the producer may exercise judgment regarding the composition or manufacturing method.

The specification may also describe the methods of sampling and testing which will be followed, instructions for inspecting, marking, and packing, and the procedure for settling disputes by arbitration or otherwise.

Methods and Results of Standardization

Most laws establishing centralized purchasing make some provision for standardization; but very few governments have accom-

[6] Dean Harvey, "The Purchase of Materials on Specifications"; address before the twenty-eighth annual meeting of the American Society for Testing Materials, Atlantic City, June 24, 1925.

plished much in this field. In some cases the purchasing agent is authorized to establish standards on his own initiative and authority; in others, the adoption and enforcement of standards rests with the legislative or administrative body to which the purchasing agent is responsible; the third plan, most widely followed, allows the using agencies to assist in the formulation of standards. Although no general principle can be stated, it is believed that the third plan is the most satisfactory. It is of course necessary to provide some final authority for adoption and enforcement of standards when the using agencies cannot of themselves reach an agreement.

In Cities.—In sixty of the manager-governed cities of over 10,000 population, the purchasing executive, whether the manager himself, the purchasing agent, or some other official buying as a part-time duty, is given some authority to direct or assist in standardization. Such is the case also in forty-five cities with mayor-council or commission government. The method of establishing standards varies widely in different cities.

In Los Angeles, the purchasing agent, the director of the bureau of budget and efficiency, and the head of the department concerned constitute a committee to determine the standard of quality or performance and to formulate the specification. But all orders and contracts over $2,000 in amount for the department of public works must conform to the standards established by that department.

The board of standardization in St. Louis consists of the comptroller, the supply commissioner, and the president of the board of public service. A somewhat similar body has recently been established in Detroit, where the mayor, comptroller, and commissioner of purchases and supplies act as the committee on standardization.

A bureau of standards has been established in Baltimore to formulate standards and specifications and to recommend their use by the city departments and institutions. Portland, Oregon, has a bureau of standards in the department of public works, which cooperates with all using agencies of the city in the formulation of

specifications, inspects deliveries of materials, and enforces the city's building code.

The city chemist of Milwaukee formulates the specifications for cleaning materials, paints, etc. after consultation with the engineers in the using departments concerned. Such specifications are then submitted to the central board of purchases; after adoption by that body they are applied and enforced by the purchasing agent. Milwaukee has made noteworthy progress in standardization.

1. Standardization in New York City.—New York City has outdistanced all others in its standardization program. In 1910 a commission on standardization of supplies was set up under the supervision of the board of estimate and apportionment. In 1913 the board made it a regular bureau under the name of the "bureau of standardization of supplies and equipment." The bureau of standardization was abolished as a distinct unit in 1919, but a part of its work and staff were taken over by the board of purchase established in that year.

For standardization purposes, the commission on standardization of supplies divided the 18,000 commodities used by the city at that time into the following forty-two classes, which are still effective and are the basis today for apportionment of responsibility among the various buyers in the department of purchase:

1. Apparatus (laboratory, etc.).
2. Arms and supplies, ammunition and explosives.
3. Athletic goods (including games, toys, etc.).
4. Books, publications, etc.
5. Cleaning materials and compounds.
6. Cleaners' machines and supplies.
7. Clothing, etc.
8. Cordage, rope, and oakum.
9. Drafting and engineering tools, instruments, and supplies.
10. Drugs, chemicals, etc.
11. Dry goods, notions, etc.
12. Electrical fixtures and supplies.
13. Fire apparatus and appliances.

14. Food products.
15. Forage (including all food for animals).
16. Fuel (including fuel oils).
17. Furniture and furnishings (including kitchen supplies and utensils).
18. Hardware (not otherwise classified).
19. Hospital supplies and surgical instruments.
20. Iron, steel, and other metals (including castings).
21. Leather, saddlery, belting, hose and hose fittings.
22. Live stock (including horses and all other animals).
23. Machinery and parts (not otherwise specified).
24. Materials of construction (including lumber, timber, and building material).
25. Materials for manufacture of prison goods.
26. Miscellaneous.
27. Nails, bolts, nuts, washers, rivets, and screws.
28. Nautical supplies (including boats and equipment).
29. Office equipment (other than furniture), supplies, and stationery.
30. Oils (lubricating and illuminating), greases, and all lubricants.
31. Paints, oils, varnishes, and painters' supplies.
32. Pipe, valves and pipe fittings.
33. Photographic materials and supplies.
34. Plumbers', steamfitters', and machinists' supplies.
35. Printed, lithographed, engraved, and bound books and forms.
36. Rubber goods (not otherwise classified).
37. Staple equipment and supplies.
38. School supplies (not otherwise classified).
39. Seeds, plants, shrubs, trees, etc.
40. Tools and implements.
41. Vehicles (including automobiles, trucks, wagons, carts, carriages, bicycles, and motorcycles).
42. Wire rope and wire.

In establishing a standard, the commission first studied the different articles used by the various departments for the same purpose. A single tentative standard was then submitted to all departments for suggestions, and to producers for their criticism.

In some specifications, several alternative qualities were proposed to satisfy the requirements of different departments. Before a standard was adopted as final, a conference was generally held with the heads of the various using departments concerned.

It soon became evident that a central laboratory was needed to conduct scientific tests for the determination of quality grades. Funds were provided for the establishment of a testing laboratory by resolution of the board of estimate and apportionment on March 13, 1911. The laboratory has operated continuously since 1911 and is now a part of the department of purchase.[7]

Although the commission, and its successor, the bureau of standardization, succeeded in formulating over 1,600 standard specifications, this list did not cover more than 9 per cent of the various commodities bought by the city. But the adoption of standard specifications had some interesting and convincing effects. For twelve years prior to 1910, municipal forage contracts had specified, and the city had paid for, "No. 1 white clipped oats." In formulating standard specifications for grain, the commission discovered that this grade of oats did not come into the New York market at all, and that the city had been receiving a lower grade than it had paid for. "No. 2 white clipped oats," to be graded by the New York Produce Exchange, were then called for in the standard specifications. The commission then found that dealers were unable to supply even the No. 2 grade at certain seasons of the year, and the specifications were again changed to call for "standard oats." Under the revised specifications, the city received the oats which it paid for, and saved thousands of dollars per year.

In 1909, New York City purchased over 445,000 pounds of butter at an average price of about 27 cents per pound. By a slight change in specifications, butter equally satisfactory for city use was purchased for 21 cents per pound, which meant a saving on the city's butter purchases of nearly $27,000 per year. These are but two of many instances which might be cited to show the beneficial results of standardization in New York City.

[7] The central testing laboratory is discussed below, Chapter IX, p. 248.

The work of standardization is now assigned to a staff member of the department of purchase. It is naturally impossible for one individual adequately to perform this task; consequently, few additions or revisions have been made for years, except for the adoption by the city of federal specifications. Many specifications are obsolete. The city is undoubtedly the loser in many cases when a specification is too rigid, necessitating special manufacture or higher quality than necessary; or too lax, permitting the substitution of inferior quality.

Meanwhile, on its own initiative, the board of city record has formulated specifications for paper in collaboration with the central testing laboratory of the department of purchase. These specifications represent several years' effort in cooperation with the city using agencies and the paper producers, and are as thorough and complete as any in the country.

New or revised specifications must be approved by the board of estimate and apportionment. The use of all standard specifications is made mandatory by the following resolution of the board incorporated in the annual budget:

> That, in so far as practicable, all contracts and open market orders for purchases to be charged against such appropriation shall be based upon specifications which are definite and certain as to character and quality, and which conform with standard specifications for the various classes of supplies, materials, fuel and forage already approved or hereafter to be approved by this Board.
>
> That, in so far as such standard specifications may be established by this board, the comptroller at the time of certifying to the sufficiency of appropriations out of which such contracts are to be paid, shall also certify that the specifications for such supplies or materials, fuel or forage, or other articles for which standard specifications have been prescribed, are in conformance with such standard specifications.
>
> That all open market orders issued by any department for supplies and materials, for which standard specifications shall have been prescribed, shall contain a description of the goods ordered, conforming with such standard specifications.
>
> That the Comptroller shall, in auditing claims for goods de-

livered on open market orders, determine, through inspection or otherwise, whether the goods delivered conform to such standard specifications.

Before advertising for proposals for work to be performed under contract and chargeable to the 1929 budget, where the cost thereof is estimated to be one thousand dollars ($1,000) or more, the proposed contract and specifications shall be submitted for approval to the Board of Estimate and Apportionment.

Many cities with centralized purchasing do not attempt standardization. The following statement by the purchasing agent of Charlotte, North Carolina, is typical of the present practice in many cities:

"Where a particular item is desired, the department wishing the purchase makes note on his requisition that the article desired can be purchased from ——, and the purchasing department issues the order accordingly. As the purchases are made in such small lots usually we do not ask for quotations, but simply buy from firm to firm each month, dividing the business up as much as is possible."

It is conceded that the economic possibilities of standardization are limited in small governments. But many large cities are shutting their eyes to reduction in supply cost by neglecting to standardize.

In States.—Standardization is more difficult in state government than in cities, for the using agencies are generally at widely separated points. The distance factor increases the difficulty of frequent contacts between the buying and using authorities, makes it necessary to maintain separate stocks at each institution, and in some cases almost eliminates the possible saving through transfer of surplus stock, whether standard or nonstandard.

This of course does not apply to certain states like Maryland and Rhode Island. Here the using agencies are within easy access of each other so that delivery to a central point for distribution is practicable. In most other states, however, distance constitutes an ever-present factor in standardization. The state institutions

in most cases must inspect deliveries; they should be thoroughly familiar with the terms and meaning of the specifications, and if possible in entire accord with the standardization program. It is therefore essential to consult the state using agencies in the establishment of standards.

All states with centralized purchasing make some attempt at standardization. In most states the purchasing agent takes the initiative, formulates standards after consultation with the using departments and institutions, and submits the specifications to his supervisory official or board, in whom is vested final authority for standardization. Practically without exception the using departments have a voice at some stage of the standardization procedure. Minnesota and Massachusetts give the purchasing agency authority to formulate, adopt and amend rules and regulations for the purchasing procedure, including standardization. The purchasing agent of British Columbia may establish standards, with the consent of the minister of the department concerned.

The director of finance and taxation in Tennessee is authorized by law to appoint a standardization committee, composed of the heads of the using agencies, to formulate and to submit specifications for his approval. South Dakota has a "committee on standards," composed of three representatives of the board of regents; three representatives of the board of charities and corrections; and three representatives of the state board of finance. To assist in the establishing of standards and in the making of tests, the purchasing agent is authorized by law to invoke the assistance of the state engineer, the state heating engineer, the state chemist, the state highway engineer, or any other technically qualified state employee. "Advisory standardization boards," composed of the heads of the using agencies or their representatives, are sanctioned by law in Massachusetts, New Jersey, and Virginia. In New Jersey and Massachusetts such boards are temporary bodies, created to consider a definite standardization problem, with a personnel representing the using departments, appointed at the request of the state purchasing agent who acts as chairman. The board in Virginia is a permanent body, composed of nine mem-

bers appointed by the governor, the state purchasing agent, and the governor who acts as chairman. Such boards in Massachusetts have been very helpful in simplifying the variety of brands and qualities used by the state and in adjusting differences and disagreements over the terms of specifications. In New Jersey they are seldom convened and serve no definite or useful purpose.

In Massachusetts such boards are, as their name implies, purely advisory; they can only recommend standards. Standard specifications are adopted by the commission on administration and finance, approved by the governor and council, and enforced by the state purchasing agent, a member of the commission. The state operates a laboratory which annually tests about 3,600 samples submitted with bids and samples of deliveries to insure compliance with specifications. During 1924 approximately 6 per cent of deliveries fell below the standard grade specified in the orders or contracts. In such cases the state is permitted to buy in the open market, charging the supplier with the difference in cost, if any. In one such instance a contractor paid the state over $1,400 as a penalty for his delivery of inferior quality.

Suppliers of foodstuffs to the state institutions are required to submit samples with their bids. A committee of institution stewards selects one as the grade or quality best suited to their requirements, and this becomes the standard sample for the contract period. A similar plan is followed in other states, such as Illinois, Maryland, and Idaho.

When purchasing was centralized in Massachusetts in 1923, a survey showed that over three hundred different styles of letterheads were in use in the state government. The next year the number was simplified to fifty, and three million sheets of paper, which the year before had cost $1.75 per thousand for printing, were printed for 50 cents per thousand, a total saving of $3,750. In the first year of its operation the Massachusetts purchasing bureau contracted for the automobile tire and tube requirements of the state's entire motor fleet, which previously had been bought by the individual departments. As an illustration of the economy of large quantity buying of a standard make, on this contract the

state paid $31.86 for one size of tire with tube which would have cost $59.70 if bought in retail lots from the same company.

By the terms of the Pennsylvania administrative code, enacted in 1923 and amended in 1927, the department of property and supplies is authorized to purchase for all departments except the departments of health and highways, and for those state institutions which may request its services. All specifications, when formulated by the department of property and supplies and approved as standard by a majority of the departments and institutions concerned, govern all future purchases, until revoked or amended. The first step taken was the formation of a general standardization committee, consisting of representatives of all departments, boards, and commissions, but not of institutions. The committee was divided into small subcommittees, to each of which was assigned the task, under supervision of the state purchasing agent, of standardizing a certain class of commodities.

The tentative specifications, as drawn up by the subcommittee, are submitted to the general committee for adoption. The stewards of the state institutions have formed an association which meets quarterly for discussion of supply problems. Committees of the stewards' association receive and consider the specifications adopted by the general standardization committee. If approved by the stewards and by the state institutions, the specifications are then fixed as the standard. Specifications initiated by the stewards' association must in turn receive the approval of the general committee before adoption as state standards.

1. Standardization in New York State.—New York is the only state which maintains a special standardizing office. The bureau of standards, established in 1922 as a branch of the board of estimate and control,[8] was transferred to, and became a part of the division of standards and purchase of the executive department in the general reorganization of 1927.[9] The bureau is supervised by the director of standards, who is appointed by, and responsible to, the superintendent of purchase. It is the duty of

[8] Chapter 385, laws of 1922.

[9] Chapter 546, laws of 1926.

the bureau to establish standards and standard specifications for all supplies, materials, and equipment which the superintendent of purchase shall deem capable of standardization after consultation with the using agencies concerned.

In establishing a standard, the bureau first ascertains the variety of qualities and brands in use. Information on the use of the commodity, together with samples of leading commercial brands and grades, is submitted to a committee representing the interested state using agencies. The report of the committee is the basis for a tentative specification which is submitted for criticism to the using agencies and to the producers of the specified commodity. Before adoption, each specification must receive the approval of the heads of the using agencies affected; in case of disagreement or dispute, the decision of the governor shall prevail. The procedure of the bureau of standards in drafting specifications is described by its former director as follows:

> A skeleton specification of the commodity or article under consideration is first drawn. This skeleton must contain all vital and essential parts of same, also the manner in which it is constructed or manufactured, together with scientific or chemical treatment thereof with inquiry as to packing and shipment.
>
> Using linen as an example, it would be necessary to secure the following information to compile a standard:
>
> *1. Quality of fabric used.* It is necessary to know whether "first line" or "tow" yarn is used and to what extent of efficiency either is used; that is to say, linen made of tow yarn seldom if ever runs over 130 threads to the inch, while first line yarn will run from 160 to considerably over 250 threads per square inch. It is also necessary to ascertain if cotton or hemp is used in connection with pure flax. From information received from manufacturers the different qualities manufactured are determined by the kind of fabric used in making same.
>
> *2. Size.* It is necessary to know different widths manufactured, whether 30″, 45″, 64″, 72″, or 80″, because all manufacturers do not make the same widths. The length is not important because linens are sold by the yard.
>
> *3. Construction.* Linens are sold on a basis of a certain number

of threads per square inch; therefore, it is essential to know the number of threads used to determine the quality of same. To secure this information, it is customary to ask for the number of threads in the warp and weft per square inch.

4. Tensile strength. The tensile strength of linen in this country varies considerably from that of linen in Ireland or England. Linen of 180 threads construction would probably test 200 pounds in Europe, while it would test only 150 pounds in this country, due to different atmospheric conditions. Therefore, it is necessary to get tensile strength of different constructions of linen in this country. With this fact in mind, it is customary to ask for tensile strength of warp and weft, said test to be made in the United States.

5. Weight. By the weight, which is computed by the square yard, the construction, and also the quality of fabric used, is determined. One hundred thirty-thread cloth would weigh approximately 4½ ounces, while 160-thread cloth will weigh considerably over 5½ ounces, per square yard.

6. Delivery. Linen is sold by the yard except when ordered otherwise, but it is necessary to know how many yards are contained in a bolt in order to fill out the standard.

It is not a hard matter to grade this particular commodity in first, second, third or fourth quality when all the information asked for above is received. Therefore the skeleton specification on table linen would be as follows:

TABLE LINEN

1. QUALITY OF FABRIC USED.
2. DIFFERENT WIDTHS MANUFACTURED.
3. CONSTRUCTION. Number of threads in warp and weft.
4. TENSILE STRENGTH. Number of pounds in warp and weft per square inch.
5. WEIGHT. Weight per square yard.
6. DELIVERY. Number of yards contained in a bolt.

This skeleton is sent to manufacturers who in turn will furnish the information asked for, together with liberal samples of linen. The samples are compared with specifications, and from same a standard is drawn on the different grades of linen without causing any reliable concern to be excluded from competition. It is neces-

sary at times to call on the manufacturers or to have their representatives call at the bureau of standards to explain more thoroughly certain details which sometimes are not made clear upon paper; and then again it might be necessary to call representatives of the manufacturers together so that certain phases or propositions can be explained and decided on by them before completion of a standard.

The bureau of standards found that knives, forks, and spoons for use in the state institutions were being purchased under a specification requiring a minimum nickel content of 25 per cent. It was further found that only one factory produced 25 per cent nickel ware and, consequently, had been securing all the state business. The specification was changed to 18 per cent nickel content which admitted the rank and file of nickel ware producers. Competition was broadened and the price was reduced 37 per cent. A test of the deliveries on the new contract showed that the quality was identical with the former deliveries. The former supplier had delivered the standard ware of 18 per cent nickel content, while the specification excluded his competitors. This illustrates the economy of broadening competition by adapting the purchases as nearly as possible to the standard commercial grade.

Reference has been made above to the simplification whereby the state's purchases of cleaning materials were reduced from seventy-five brands to ten standard grades. Through purchase of cleaning materials by quality specification instead of by trade brand, with a resultant widening of competition, the price was reduced, on an average, 31 per cent, or a saving on the first year's purchases of this one commodity of over $18,000.[10]

The methods and results of standardization in Massachusetts and New York as described above are by no means representative. Most states have made little attempt to establish quality or performance standards. They are content to specify the "equivalent" of some well-known trade brand, or to depend upon reliable vendors to furnish satisfactory quality.

[10] Appendix E reprints the report of the director on the first year's work of the New York state bureau of standards, which records more in detail the results accomplished through standardization of commodity specifications.

Indeed, such practice is not entirely to be condemned. The purchasing department of New Jersey, which has a reputation for exceptional efficiency, bases its system largely upon mutual confidence between buyer and supplier instead of upon definite specifications. As stated by the former assistant purchasing agent:

> It was necessary so to adopt standards and specifications as to enable the source of supply honestly to comply with them. In this connection, the State of New Jersey learned that the manufacturer knows better than the consumer of what component parts his products should be manufactured and, therefore, in adopting a standard or writing a specification, this department not only calls upon its own technical advice, but also requests the assistance and advice of the sources of supply . . . The writer has examined hundreds of standards and specifications in use throughout the country and knows that a very small percentage are really effective or really mean anything. Therefore, New Jersey felt that, in addition to a specification, its business would have to be founded with a certain degree of good faith between the sources of supply and the state. We are not altruistic, but we believe that if a source of supply knows that it will be treated honestly, fairly and justly, such source of supply will give honest, just and fair treatment to the purchaser.[11]

In the United States Government.—The government of the United States has done more for the cause of standardization in public purchasing than all other governments combined. Activities in standardization are extensive enough to justify the publication in 1927 of the first edition of *The Standards Yearbook,* a volume of 392 pages, more than half of which is devoted to a description of the work in standardization of the various federal and local government agencies during the past twenty-five years.[12]

[11] Joseph M. Coyle, "Operation of Centralized Purchasing in New Jersey," *The Annals of the American Academy of Political and Social Science,* May, 1924, p. 294.

[12] *The Standards Yearbook,* 1929, Bureau of Standards Miscellaneous Publication 91, is procurable from the Superintendent of Documents, Government Printing Office, Washington, D. C., at $1 per copy. This volume also describes the efforts of national and international standardizing agencies in this and other countries.

1. The Bureau of Standards.—The Bureau of Standards of the Department of Commerce was established in 1901 as the "consulting, testing, standardizing, and research laboratory of the government." It now has fifteen divisions with a total staff of over nine hundred. The work of the Bureau of Standards in the field of standardization has grown in recent years to such an extent that in 1928 a commercial standards group, with four divisions, was established. This group was placed under the supervision of an assistant director, who is R. M. Hudson, formerly chief of the division of simplified practice. The other divisions of the bureau form a research and testing group, and are likewise supervised by an assistant director.

By elaborate experiments and performance tests, the Bureau of Standards determines the government's requirements as the basis for formulation of specifications. Tests are made each year of samples submitted with bids and samples of deliveries to the various purchasing agencies of the government.

2. The Federal Specifications Board.—The federal government began in earnest the work of standardizing specifications when the Federal Specifications Board, already mentioned as one of the eight boards operating under the chief coordinator, was created by executive order No. 42 on October 10, 1921.[13] The board is composed of one representative of each of the executive departments and independent establishments, with the director of the Bureau of Standards as chairman.

The board as a whole acts as a steering committee, while the routine business is handled by an executive committee of fifteen of the members. The technical work is performed by committees of experts from the various services, representing as many as possible of the using agencies concerned. Each committee is assigned to a certain field or group of commodities, such as metals, electrical supplies, textiles, coal, etc. Seventy-four such technical committees were functioning in March, 1929. In preparing a tentative specification, the technical committee consults all existing government or commercial specifications and solicits advice and

[13] See Chapter II, p. 22.

suggestions from commercial producers. The tentative specification is submitted for comment and criticism to all using agencies of the federal government, and, through the American Standards Association (formerly the American Engineering Standards Committee), to all interested trade and engineering bodies in all parts of the country. All criticisms received are referred to the technical committee for its guidance in preparing the final draft. Three months after promulgation by the board, it becomes a "master specification," becomes binding upon and governs all future purchases of the given commodity by all branches of the federal government, and remains in effect until rescinded or revised. Any dissatisfied department or establishment may appeal within three months to the chief coordinator for a change in, or exemption from use, of the specification. If the chief coordinator's decision is adverse, appeal may be taken, in turn, to the director of the Bureau of the Budget, and finally to the President of the United States whose decision is final.

Up to March 1, 1929, the board had adopted and promulgated 671 United States government master specifications, but has barely made a beginning on the list of commodities used in the federal service.[14] Prior to the formation of the Federal Specifications Board, the individual executive departments, notably the War and Navy departments, had formulated a total of 11,000 specifications. All these remain in effect for departmental purchases until superseded by master specifications covering the same commodities.

It is impossible to estimate accurately how much has been saved to governments through the preparation and use of federal specifications, but a few illustrations are suggestive. The federal specification for varnish reduced the price to the government from $4.37 to $1.44 per gallon. Fountain pen ink is now purchased for $2.80 per dozen quarts in a higher quality than could be bought

[14] The majority of the federal specifications are sent free of charge to any government or individual; a few are sold for the nominal cost of printing. *Bureau of Standards Circular No. 319,* periodically revised, gives an up-to-date list from which anyone can select and send for the specifications in which he is interested.

retail for from $12 to $14. The Post Office Department found through test that one-ply jute twine with the same tensile strength as two-ply twine was equally satisfactory for the postal service; the change in specification resulted in a saving in 1926 of nearly $12,000. The elimination from mail sacks of the blue stripe, which served no useful purpose, saved 1 cent per yard on the 3,000,000 yards of canvas used annually by the Post Office Department, or a total saving of $30,000.

The federal specifications are likewise playing an important rôle in state and local governments, many of which have taken them over for application in local purchasing.

3. Federal Standard Stock Catalogue.—The chief coordinator has initiated a project which, when completed, will help greatly to eliminate the present lack of uniformity in nomenclature of federal purchases and federal property. In the past, articles have been described in orders and other official papers according to the understanding and preference of the individual writer, which has led to considerable confusion, error, and unnecessary complications. The proposed federal standard stock catalogue, as described by the assistant chief coordinator, will comprise the following data and information:

United States Government Master Specifications. The technical requirements of these specifications are mandatory upon all government departments and independent establishments. The list has been arranged in two forms, alphabetical and numerical.

Groups for Procurement. Each group represents a major division of productive industry. These groups are in turn subdivided into divisions conforming to the general trend of specialization in industry.

Classes for Storage and Issue. The criteria of classification are similarity of application or storage requirements. This section also embodies storage notes and storage precautions.

General Index of Federal Property. Lists in alphabetical arrangement each item of supplies regularly procured, stored and issued by or for the various government departments, and indicates the United States government master specification applying thereto,

the procurement group and the class for storage and issue in which each such item should be carried.

Group Catalogue. Embodies detailed information required by government procurement agencies, as to geographical distribution of sources of supply, variation in practice as to production or marketing, and other data requisite for economical and expeditious procurement.

Class Catalogue. Lists by classes for storage and issue, and in alphabetical arrangement under each class, each item of supplies regularly procured, stored, and issued by or for the various government departments, standard nomenclature, stock number, data as to departments by which used to facilitate interdepartmental transfer of supplies, approximate prices, and code words to facilitate the placing of orders by radio or telegraph, in the case of each item.[15]

As originally planned, the standard stock catalogue was to include categories of federal property, but this phase of the project has been abandoned. The work of compiling this catalogue will be done by the Navy Department, under direction of the chief coordinator. It is expected to be ready for publication in 1929. The use of this standard stock catalogue by the various using agencies will help to coordinate and to standardize the purchasing and storing methods of the federal government.

4. Facilitating the Use of Specifications.—In 1925 the United States Department of Commerce published a volume called *The National Directory of Commodity Specifications,* which had been two years in preparation under the direction of A. S. McAllister, now chief of the division of specifications of the Bureau of Standards. This volume is a directory of all the commodity specifications known to exist, over 27,000 in number, arranged by subject according to a decimal classification under ten main commodity groups. The *National Directory* does not reproduce the actual specifications, but lists them according to name, number, and source. It thus indexes all the specifications issued by the Federal Specifications Board and by the individual departments of the federal government, by state and local governments, public

[15] D. B. Wainwright, Jr., *The Tax Digest,* March, 1928, pp. 104, 105.

utilities, technical societies, and trade associations. Any government wishing to establish standard specifications can, by use of the *National Directory*, secure for study and comparison all the existing specifications on any given commodity.[16]

Following the publication of the *Directory*, the Bureau of Standards undertook the preparation of an "encyclopedia of specifications," to be issued in successive sections. Each section will be confined to a commodity group and will reproduce in full or in abstract the one or more existing specifications on each article which are adjudged to be most satisfactory for general use. The encyclopedia will encourage more widespread standardization and use of definite specifications in purchasing and, most important of all, it will tend to "standardize" existing standards. The first section of the encyclopedia, *Standards and Specifications in the Wood-Using Industries,* was issued on October 5, 1927.[17] The second section of the encyclopedia will be *Standards and Specifications for Nonmetallic Minerals and Manufactures Thereof.* It will be issued sometime in 1929.

"Among the duties assigned to the Federal Specifications Board are not only the compilation and adoption of standard specifications for materials and services but also the bringing of the government specifications into harmony with the best commercial practice whenever conditions permit, bearing in mind the broadening of the field of supply." [18] As a means for doing this, the Bureau of Standards has devised the so-called "certification plan." By this plan manufacturers of each commodity covered by a federal specification are asked whether or not they will, when requested to do so, certify to purchasers that deliveries in accordance with the designated federal specification will comply with the requirements and tests of the specification and will be so guaran-

[16] *The National Directory of Commodity Specifications* is sold by the Superintendent of Documents, Government Printing Office, for $1.25 per copy.

[17] *Standards and Specifications in the Wood-Using Industries, Bureau of Standards Miscellaneous Publication 79,* may be purchased from the Superintendent of Documents, Government Printing Office, for $1.50 per copy.

[18] *The Standards Yearbook,* 1927, p. 388.

teed by the supplier. If so, the name and address of the manufacturer is placed on the "willing-to-certify" list of suppliers. Up to January 1, 1929, the bureau had compiled 248 lists of "willing-to-certify" manufacturers covering 248 federal specifications. Any or all of these lists will be furnished by the Bureau of Standards without charge to any purchasing agent for a state or local government.

Inseparably associated with the certification plan, is the "labeling system" whereby "willing-to-certify" manufacturers label their product as conforming with the federal specification covering it. A number of manufacturers have adopted this plan as an assurance to the purchaser and as a further means for widening the use of United States government master specifications. The labeling plan has been endorsed by the National Industrial Council.[19]

The certification plan and labeling system will greatly extend the usefulness of federal specifications. As they are put into wider use by governments and by private corporations, the commodities which they specify will tend to become the standards of production; prices will become stabilized and will be lowered through mass production of the standard grades and qualities; deliveries will be speeded up, for distributors can keep larger stocks of the standard items; the small-quantity or medium-quantity buyer, who oftentimes lacks facilities for testing deliveries to enforce compliance with specifications, can rely with greater assurance upon the certified list of producers; and the routine task of purchasing is simplified when the commodities can be ordered from the certified list of suppliers by reference to the specification alone.

[19] For a fuller discussion of this subject see "Certification Plan and Labeling System," by A. S. McAllister, *The Annals of the American Academy of Political and Social Science,* May, 1928, pp. 240-246.

CHAPTER VI

DETERMINATION OF PURCHASE REQUIREMENTS

The purchasing procedure begins when the buying agency is notified of the requirements of the using agency. Such notification is made on a form called a "requisition"—a statement of what is "required." Requisitions are of two general kinds: a detailed *estimate* of requirements covering a certain definite future period and based on anticipated need; or a statement of an actual and present need, demanding immediate or early procurement. Every purchasing system makes provision for the second kind, variously referred to as "requisition," "emergency requisition," or "out-of schedule requisition."

The first kind of requisition, covering an anticipated need, is generally referred to as an "estimate." It may be an itemized estimate of requirements in supplies, materials, and equipment for a certain definite future period, sometimes for the entire budget year. Such statement may give a lump-sum estimate of the requirements during the next fiscal period, for use by the budget-making official as a basis for the annual appropriation. When checked with the budget appropriation by the proper fiscal authorities, it may be turned over to the purchasing agent as a guide in planning the purchases for the ensuing period. These estimates are to be distinguished from that form of requisition which is the statement of immediate need and the official authorization to purchase or to issue goods from stock.

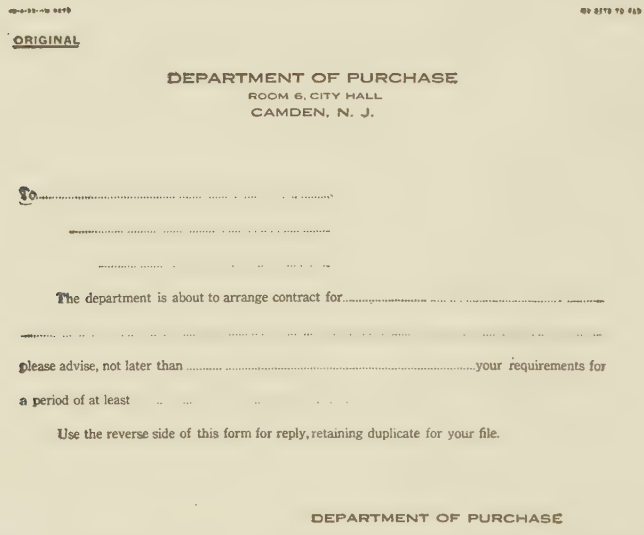
The requirements of a government can be estimated more accurately and with less effort than the requirements of a private corporation. Private business, especially in the manufacturing field, is more subject to sudden change of plan; the exigencies of competition, an unexpected increase or decrease in sales, an unforeseen boom or slump in general business

conditions—these factors influence the buying schedule. The activities of government, on the other hand, are usually planned for the fiscal year, and are little subject to change. At the adoption of the annual budget, the using agencies know what funds are available and, if they have been at all systematic in their record-keeping, they can without difficulty predicate their staple supply requirements for the ensuing period on the basis of their past consumption and their future work program. If he be familiar with the work and plans of the using agency, the experienced buyer can tell from past consumption records at what time of year the demands for *matériel* will be heaviest and will be prepared to furnish the supply commodities as needed without special and advance notice. The purchasing agent should also be able to check the estimates of requirements to determine whether they are reasonable and valid, and thus be of very great help to the budget-making authorities.

In many cases the heads of using agencies lean too heavily on their past consumption in predicating their requirements for the next budget period. This is well illustrated by an analysis of estimates conducted by the Bureau of Municipal Research of Hoboken, New Jersey, at the beginning of the 1926 budget year. The bureau took all estimates for *matériel* submitted by the various departments and institutions of the city and studied them in the light of past records of actual consumption, amounts on hand, and the prices paid for commodity items by cities of comparable size. It was found, for example, that the fire department had received an appropriation of $4,500 in 1925 for cleaning the fire houses, and had requested a similar amount for the same purpose for 1926; whereas the department of public property and parks was given a liberal appropriation for taking care of all public buildings, including fire houses. As a result of its survey of all items, the bureau showed that the 1926 request for supplies, materials, and equipment could be reduced by over $72,000.

But while its purchases are not as a rule subject to minute changes in standards and qualities such as are common to highly competitive lines of industry, a government must operate without

cessation. Like the railroads, power and light companies, and other public utilities, a government cannot suspend operations during a financial crisis or a period of high prices. True, the repair and construction of pavements or highways, for example, can be curtailed when labor and material prices are highest, or expanded in a period of depression to relieve unemployment. But the police, fire, and health departments, and other major divisions



ORIGINAL

DEPARTMENT OF PURCHASE
ROOM 6, CITY HALL
CAMDEN, N. J.

To.....

The department is about to arrange contract for.....

please advise, not later than .....your requirements for

a period of at least

Use the reverse side of this form for reply, retaining duplicate for your file.

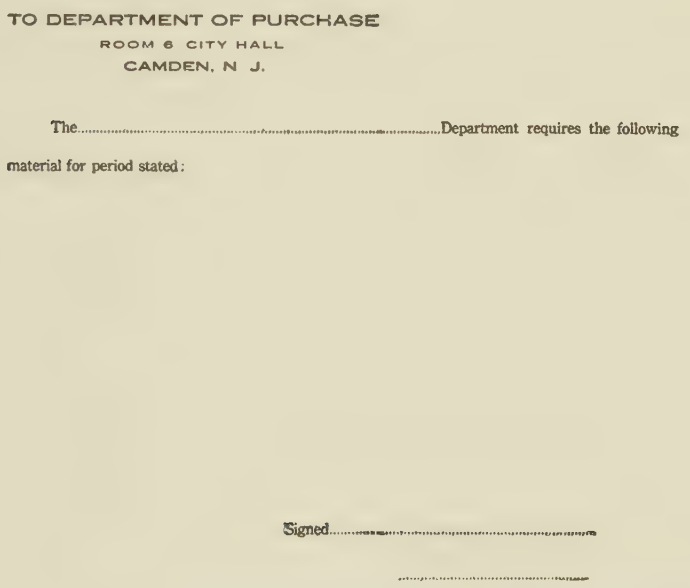
DEPARTMENT OF PURCHASE

FIG. 5. REQUEST FOR ESTIMATE OF REQUIREMENTS FOR DEFINITE FUTURE PERIOD, CAMDEN, NEW JERSEY ($8\frac{1}{2}'' \times 7''$)

of government must be on the job constantly. The government purchasing agent, therefore, must buy and arrange for prompt deliveries of the needed supplies and equipment irrespective of market prices. It is therefore all the more imperative that he watch price trends and buy the estimated requirements at the season of lowest prices.

Time of Filing Estimates.—To do timely buying of any commodity, the purchasing agent needs authority to call for estimates at such times and for such period in advance as he may designate. Such authority is granted to the purchasing agency in

thirty-six cities included in this study, and in ten states. More governments, it is believed, will in future extend to the purchasing agent the authority to call for estimates at any time, not as a license or an added prerogative, but as a necessary means to the performance of his duty. When about to arrange an "advance" purchase in a favorable market, the purchasing agent of Camden, New Jersey, uses a special form which combines the request for


TO DEPARTMENT OF PURCHASE
ROOM 6 CITY HALL
CAMDEN, N J.

The.....Department requires the following material for period stated:

Signed.....

FIG. 6. REPLY OF USING DEPARTMENT TO FIG. 5, CAMDEN, NEW JERSEY ($8\frac{1}{2}'' \times 7''$)

estimates with the reply by the using agency. The form is sent out in duplicate on a 7 x $8\frac{1}{2}$-inch sheet (Figure 5). The using agency is notified of the proposed purchase and asked to estimate its requirements for a certain stated future period. The reverse side of the form provides space for the reply (Figure 6). The duplicate copy of the form is retained by the using agency for its records.

Indeed, governments frequently err in making the date for filing of estimates too rigid and inflexible. Detailed estimates for

the entire budget year are required from the using agencies in the state governments of Delaware, Pennsylvania, Rhode Island, and Texas. Since the requirements of a using agency can seldom be anticipated in detail for a year in advance, this system paves the way for the filing of many emergency requisitions or the placing of many emergency orders. The South Dakota law specifies quarterly estimates, to be submitted to the director of purchase and printing before the tenth day of January, April, July, and October of each year, but the director is given authority to vary the schedule of purchasing by special rules and regulations. The purchasing agency in several states has power to establish and to change the periods for filing estimates. This makes the purchasing schedule more flexible and responsive to changing market conditions.

Some states vary the date of filing the estimate according to the class of commodity. For this purpose, it is helpful to have established a classification of commodities, described elsewhere in this chapter and in preceding chapters.[1] Estimates of requirements in stationery, furniture, fuel, and light are submitted annually in Kansas. Estimates for subsistence supplies for institutions are submitted quarterly in Alabama, Idaho, and Wyoming, while the requirements in other commodities are estimated quarterly in Alabama, semiannualy in Idaho, and annually in Wyoming. All requirements are estimated monthly in Arizona, Nebraska, Vermont, and West Virginia. Twelve state purchasing offices receive estimates quarterly. In California estimates are received at regular intervals only from the state institutions; other agencies await the call of the purchasing agent or submit requisitions from time to time as the needs arise. Maryland and Wisconsin receive annual estimates for coal, but quarterly estimates for other commodities.

Long-term estimates are more common in states than in cities. The greater distance between the using and buying agencies in states usually requires more time for adjustment of errors and misinterpretations in the estimates, and the complexity of the

[1] See pp. 89, 104, 127, and 133.

problem of distribution requires the placing of orders and contracts far enough in advance to prevent supply shortages.

The purchasing agency of Michigan has forty-seven commodity classifications for the state's requirements. On the first of each month estimates are received for one-third of these classifications so that the same classification is covered four times per year. By this method a certain number of orders and contracts are awarded each month for the next ensuing quarter. Maryland follows a similar plan with a printed buying schedule (Figure 7), which is furnished to all using agencies as a guide and a reminder. The state's purchases are divided into three major groups, each of which is purchased four times per year. Estimates of requirements in the first group are filed on or before the fifth day of January, April, July, and October; the second group in February, May, August, and November; and the third group in March, June, September, and December. Annual estimates for anthracite coal are called for in March; bituminous coal in June; and incandescent lamp bulbs in December. "Seasonal purchases" are made of these three commodities.

Only thirty-three of the 171 cities included in this study have definite periods for the filing of estimates. Four cities require annual estimates, which in St. Louis are confined to fuel, milk, ice, and printing supplies; and in New York City, to printing supplies. Jersey City, New Jersey, requires estimates semiannually; New York City and Charleston, South Carolina, quarterly (for staple supplies); and New Orleans and Boston, semimonthly. Fifteen cities require monthly estimates. In Indianapolis and St. Louis, the monthly estimate is limited to subsistence commodities used by the city hospitals and the penal and charitable institutions.

The preparation of estimates is usually the joint work of several officials. In an institution, each department may be called upon to estimate its individual requirements. These in turn are consolidated in the office of the superintendent or steward, and one estimate is sent to the purchasing or budget-making authority. In a hospital the food supplies may be estimated by the dietitian, the fuel by the engineer, the surgical instruments and supplies by

the head surgeon, the textiles and linens by the matron, etc. Separate estimates may be filed by the major divisions of a large department; but since the estimates generally require the approval of the department head, they are consolidated and filed by departments rather than by divisions of the department. If the division or bureau rather than the department is considered the governmental unit for budget-making purposes, estimates are filed and appropriations are made for supplies, materials, and equipment on that basis.

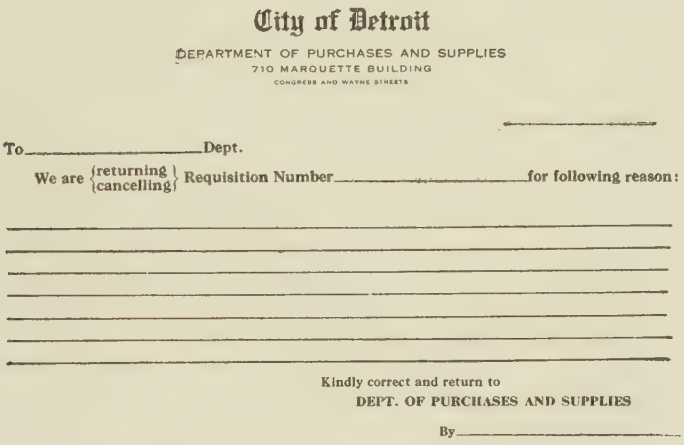
Approval of Requisitions.—Estimates are generally signed by the head of the estimating unit, whether the superintendent of the institution or the head of the department or division. Requisitions for emergencies or casual needs are usually signed by the superintendent for institutions, and by the division chief for departments. In many cities the commissioner or head of the department often signs the requisition in addition to the head of the requisitioning division or branch.

The requisition covering a present need is generally submitted directly to the purchasing agency. In the large purchasing office it is examined and checked by a requisition clerk. In Philadelphia requisitions are checked by the assistant purchasing agent. In the smaller, sometimes one-man, office the checking of requisitions is a part of the work of the purchasing agent himself. Where the city manager or some other official purchases as a part-time duty, this may be delegated to the assistant or secretary; but the responsibility for approval, amendment, or rejection of the requisition rests with the manager or other official who is responsible for purchasing. If the approval of some other department or official is required, the requisition is forwarded for that purpose by the purchasing agency after being checked as to price and quantity estimates. Detroit uses a special form (Figure 8) to notify the requisitioning agency of the return or cancellation of its request and to explain the reasons for such action. The purchasing department retains the duplicate of this form for its records.

Fifty-four managers of small cities personally approve all requisitions. In thirty-two manager cities the purchasing agent has

this responsibility, sometimes jointly with the manager. In seventeen manager cities, the approval of the chief fiscal officer is required before the purchase is initiated.

Similar methods of approving requisitions are followed in cities with the mayor-council or commission form of government. In thirty cities, only the approval of the purchasing office is required; in fourteen, the finance department; in seven, the mayor's



City of Detroit

DEPARTMENT OF PURCHASES AND SUPPLIES
710 MARQUETTE BUILDING
CONGRESS AND WAYNE STREETS

To_____Dept.

We are {returning / cancelling} Requisition Number_____for following reason:

Kindly correct and return to
DEPT. OF PURCHASES AND SUPPLIES

By_____

FIG. 8. EXPLANATION OF REASONS FOR RETURNING OR CANCELING REQUISITION, DETROIT, MICHIGAN (8½"×5½")

office. The city council in Minneapolis and Nashville must approve all estimated expenditures if over $1,000 in amount; in Davenport, if over $200. The approval of the purchasing agent in Minneapolis, and of the mayor in Nashville, suffices for expenditures less than $1,000.

The board of commissioners or one of its members approves requisitions in most counties. The signature of one commissioner is sufficient in Yolo County, California, for expenditures under fifty dollars; if in excess of that amount, the whole board must approve. The whole board approves requisitions in Monroe County, New York, at its regular semimonthly meetings.

In states, as elsewhere, requisitions are usually checked, as to

estimated price and quantity, by the purchasing office before they receive any other required approval. The purchasing agent's approval is sufficient in fifteen states; but, in eleven of these, this is tantamount to the approval of the finance department, since purchasing is one of its divisions. In New Jersey a member of the comptroller's staff is detailed to the purchasing department especially to check requisitions and orders. In eighteen states, the purchasing agent cannot proceed with purchase until the requisition receives the approval of his supervisory department head or supervisory board. In Montana, requisitions must be submitted for approval to the state board of examiners.

Determining the Total Requirements.—If the estimated requirements of all using agencies for a certain commodity or class of commodities are filed synchronously, the purchasing office adds up the various requests to determine the total requirements. Here standardization enters the picture. If staple requirements have been standardized and delivery conditions permit, the requests of many using agencies can be combined and negotiation can be begun, leading to the placing of bulk orders. Otherwise, the total requirements must be procured through the ordering of many small lots. In every group of requisitions there will be, of course, some special articles incapable of standardization which must be ordered separately.

An out-of-schedule, or emergency, requisition usually leads to one or more special orders, unless perchance other requisitions for the same articles are received at the same time from other using branches.

Centralized purchasing should result in a check on, and a reduction in, the number of requisitions received, if the purchasing agent has authority to secure estimates for future periods and to purchase in bulk in anticipation of need. This is shown by the experience of Dayton. In 1915, the first year of centralized purchasing, the number of requisitions received by the purchasing office was 5,335; in 1916, the number had declined to 3,298; and in 1917, to 2,877, although the work of the government had meanwhile been expanded.[2]

[2] Rightor, *City Manager in Dayton,* p. 193.

Contents of a Requisition.—The requisition should supply the following information:

1. The Number of the Requisition.—The requisition number may be printed on the form, filled in by the requisitioning agency, or assigned in order of receipt by the purchasing agency. All three methods are now in use. The city of Chatham, Ontario; Santa Cruz County, California; and the province of British Columbia issue requisitions in pads numbered serially. A record is kept of the numbers issued to each using agency; this identifies the requisitioner in case the name has not properly been filled in. Or the numbers may be filled in by the requisitioning agency as in the states of Arizona, Idaho, and Wyoming. The most common is the third method, whereby the requisitions are numbered by the purchasing agency in the order of their receipt. In many systems the requisitioning agency fills in its own serial number which appears on the form in addition to the number assigned by the purchasing agency. Pending purchase and delivery, the requisitions are filed either in numerical sequence or by departments. A cross reference is usually provided by indicating on the requisition the number of the order by which each item was purchased, and on each order the requisition number authorizing the purchase.

2. Date of Requisition.—This is invariably supplied by the requisitioning agency.

3. Name of Requisitioning Agency.—Space is provided for this information near the top of the form. In a small government with few using agencies, the name of the department is enough for accounting purposes. In more elaborate organizations, both the name of the department and the name of the particular branch or division are required. Philadelphia furnishes the largest using agencies with pads of blank requisitions, on which the name of the department is printed.

4. What is Wanted, with Description or Specifications.—The purchasing agency should be told definitely what is required. If it be a staple commodity or one for which standard specifications have been established, the description may be a mere reference to the article or its specification number. Delays and

dissatisfaction often result from incomplete descriptions. Purchasing agencies are sometimes accused of furnishing unsuitable goods, when the fault can be traced to a misunderstanding of the requisition.

5. The Quantity Required.—The total quantity and the unit of quantity should be definitely stated.

6. Delivery Date Required or Preferred.—This information determines whether the purchase must be made immediately from the nearest available supply source, or whether the purchase may be postponed until wider competition can be secured through solicitation of bids. Many requisitioning offices, in order to avoid supply shortage, specify a delivery date much earlier than delivery is actually required. The purchasing office should carefully scrutinize the delivery date stated on the requisition, and should consult the records of past consumption trends and the records of stock on hand, to determine whether the request is valid. By such action, the government is often spared the extra expense resulting from an unnecessary rush order.

7. Delivery Address.—Some using agencies have branches at different points. The purchasing office must know where delivery is to be made so that the supplier can be instructed accordingly.

8. The Account or Appropriation to be Charged.—This indicates the purpose of the proposed expenditure. It is chiefly of use to the finance department in entering the estimated amount of expenditures as a charge against the proper appropriation account.

9. The Signature of the Requisitioner and of the Approving Officer.—The signatures to the requisition are placed either at the bottom of the form following the statement of what is required, or near the top of the form in connection with the name of the requisitioning agency.

Supplementary Information.—The data mentioned above are necessary if the requisition is to serve its intended function. But part or all of the following supplementary information may well be included to facilitate the interpretation and handling of a requisition:

1. Amount of Goods on Hand.—This information is of considerable value to the purchasing agency. In governments with no central stores or with widely scattered using branches, it is useful for checking the stock and consumption records in the central purchasing office. If the consumption trend of the requisitioning agency is known, the purchasing agency, given the amount on hand, can determine whether the required delivery date as specified by the requisitioner is accurate, and can govern the purchase procedure accordingly. The amount on hand cannot be given for repair parts, new equipment, or supplies not previously used; but it is useful and important in the requisitioning of staple articles of supply. Two columns are provided for such information on the requisition used in Philadelphia: one is headed "quantity on hand and due"; the other, "average monthly consumption" (See Figure 9). Since most purchasing agencies keep some kind of record of past purchases, segregated both by commodities and by using agencies, the average monthly consumption generally need not be specified on the requisition.

2. Commodity Classification.—This is useful in governments which have established a definite classification of their requirements, such as the states of New Jersey and South Dakota, and the cities of Buffalo, Dayton, Milwaukee, Los Angeles, Philadelphia, Detroit, Pittsburgh, and New York. The Philadelphia requisition (See Figure 9) has two parallel columns for this information: one is headed "class"; the other, "item." In Dayton (See Figure 14) reference is given to "code number." Such information supplements the written description as an aid to the purchasing agent in determining what is required. Smaller governments, with limited requirements, generally do not need a code classification.

3. Catalogue Reference.—Very few governments reserve a column on their requisition for this information, but it is believed that the practice should be more general. Reference to a catalogue number or page is likely to speed up the purchasing process. If the commodity has not before been requisitioned, the purchasing agency is directed to one source of supply as a starting

point for locating competitive sources. If the article is difficult to describe or has only one supply source, the reference to the catalogue page and number eliminates the cause for, and reduces the possibility of, misunderstanding of a detailed description, and saves the time of both the requisitioner and the purchaser. The catalogue reference can of course be supplied in the space given over to description of articles, but a special column for the purpose serves as a reminder to the requisitioner (See Figure 11).

4. *Estimated Cost.*—Such information is unnecessary if the approval of the finance department is reserved until the order is ready for issue, when the amount of the expenditure is more definitely known. But the estimated cost is very generally stated by the requisitioner, in a column so labeled, or captioned "unit price" (See Figures 9, 10, and 11).

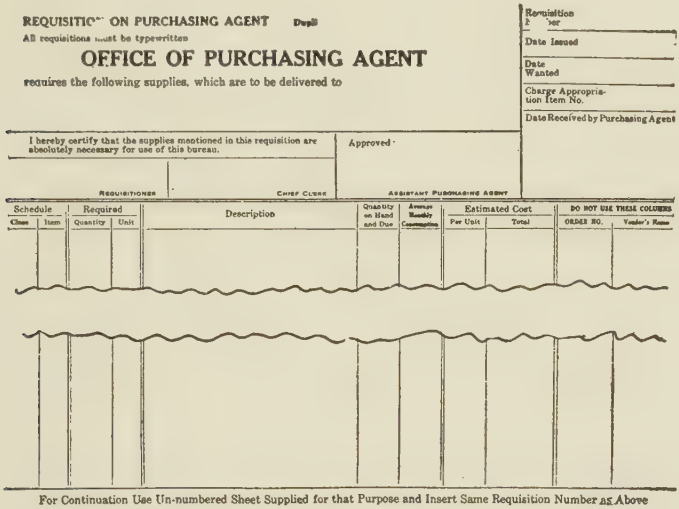
5. *Account Number.*—The purchasing agency may assign to each using agency a number or letter, which is filled in on each requisition received from that source. This number, supplementing the regular requisition number, serves as a cross index for reference during and after the purchase.

6. *Shipping Directions.*—This indicates the preference of the requisitioning agency regarding the transportation methods to be used and the address to which goods are to be delivered. This is of considerable value, especially in states (See Figure 12).

7. *Statement of Intended Use of Goods.*—The intended use is made a part of, and is set forth in the same space with, the description of the articles. This statement enables the head of the department to give his approval intelligently; it assists the finance department in determining the appropriation to be charged; it prevents the exhaustion of the appropriation through incorrect charges; and it helps the purchasing agency to secure the quality adapted to the required performance (See Figure 11). This information is often exceedingly important.

8. *Statement by Requisitioner that Goods are Necessary and that Available Funds are Sufficient to Defray the Order.*—Governments are almost a unit in requiring this statement. The form of statement differs widely from the simple declaration

that "the following supplies are needed" to the formal and solemn statement that "the above supplies are absolutely necessary," are "to be used only for the purpose indicated above," and "to the best of my knowledge and belief the funds available to the credit of this department are sufficient to defray this expenditure" (See Figures 11 and 15). The statement usually appears directly above the signature of the requisitioner, although here also practice differs widely.


REQUISITION ON PURCHASING AGENT Dupli

All requisitions must be typewritten

OFFICE OF PURCHASING AGENT

requires the following supplies, which are to be delivered to

Requisition No.

Date Issued

Date Wanted

Charge Appropriation Item No.

Date Received by Purchasing Agent

I hereby certify that the supplies mentioned in this requisition are absolutely necessary for use of this bureau.

Approved

REQUISITIONER CHIEF CLERK ASSISTANT PURCHASING AGENT

Schedule Class	Item	Required Quantity	Unit	Description	Quantity on Hand and Due	Average Monthly Consumption	Estimated Cost Per Unit	Estimated Cost Total	DO NOT USE THESE COLUMNS ORDER NO.	Vendor's Name

For Continuation Use Un-numbered Sheet Supplied for that Purpose and Insert Same Requisition Number as Above

FIG. 9. REQUISITION FORM, PHILADELPHIA, PENNSYLVANIA (8½"×11")

9. Approval of Finance Department.—If its approval is reserved until the order is prepared for issue, the finance department may not receive a copy of the requisition. But when the estimated cost of the requisition is the basis for the encumbrance against the appropriation, a copy of the requisition becomes a permanent record of the finance department and is used for checking the invoice when it is presented for payment (See Figures 10 and 11).

10. Approval of Purchasing Agent, Manager, Mayor, or

Other Official.—This supplements the approval of the requisitioning officer.

11. Purchasing Records.—Almost invariably certain columns are reserved for the use of the purchasing office, and the requisitioner is instructed to leave them blank (See Figures 9 and 15). The heading and use of these columns vary, but usually they indicate the order number and the supplier of each item in the same

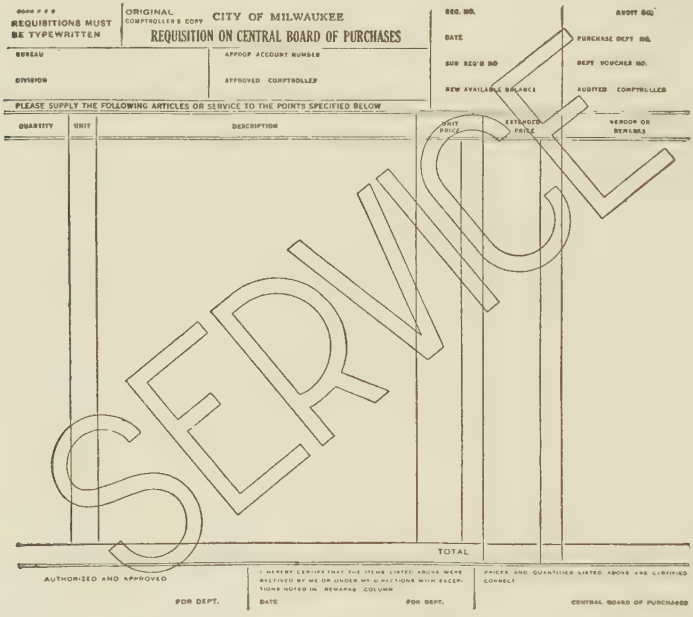


FIG. 10. REQUISITION FOR CONTRACTUAL SERVICES, MILWAUKEE, WISCONSIN (9″×8″)

horizontal line with its description, estimated cost, etc. The price paid is also sometimes stated. In some cases, space is provided for filling in the date of receipt of requisition at purchasing office. A few offices stamp in the hour of receipt, but this practice is confined to large systems and to cases where disputes may later arise. The forms may also provide space for listing the competitive quotations received from the various dealers (See Figure 15).

12. Instruction to Requisitioners.—The procedure for submitting requisitions is generally so well established and understood that there is little need for instructions to the requisitioner. But occasionally instructions are given, as in Figure 15.

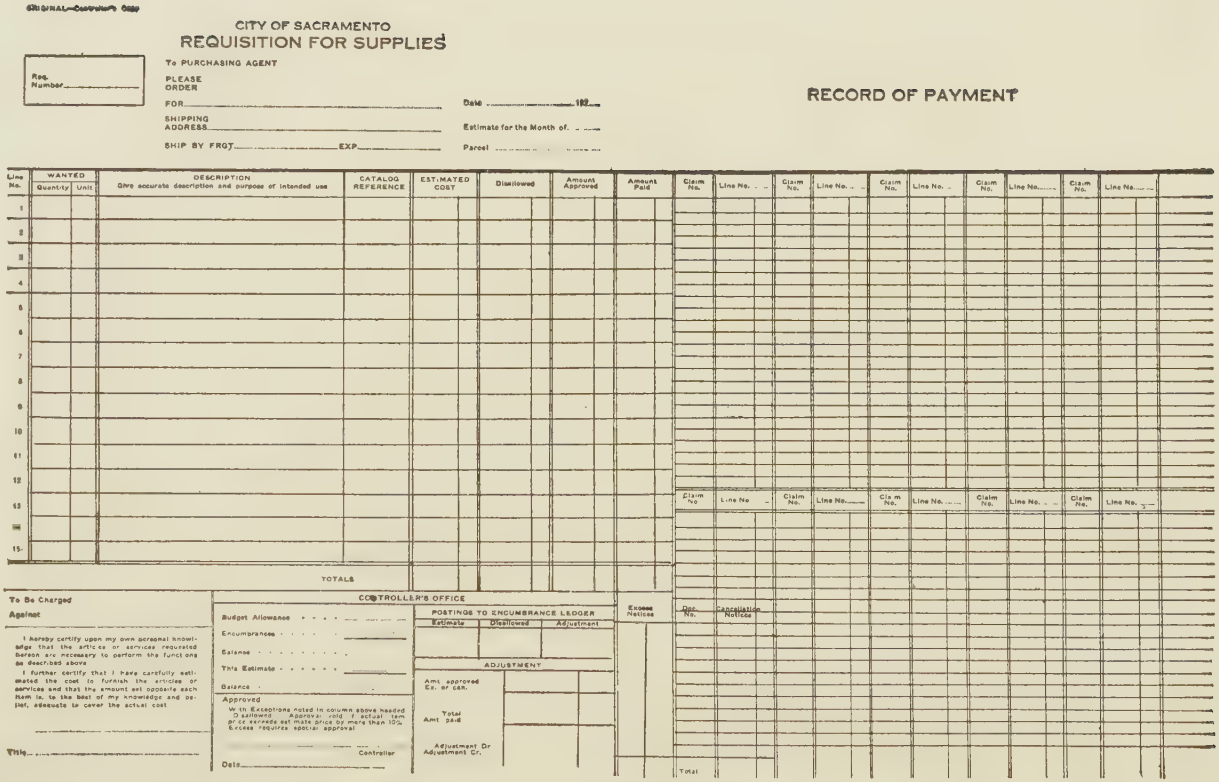
Types and Sizes of Requisitions.—Most requisitions are 8½ inches wide and either 5½, 11, or 14 inches long. The regular letter size, 8½ x 11 inches, is the most popular, since it can be kept in standard filing equipment. Some governments use long and short forms, differing from each other only in the length of space devoted to the listing and description of the supplies needed; the long form is used for detailed requisitions covering various classes of supplies. The state of Michigan uses an 8½ x 11-inch form, with the dimensions reversed, being 11 inches wide and 8½ inches long to allow more space for description of items.

Requisitions of many odd sizes are in use. The form used in Chatham, Ontario, the smallest known, is 3¼ x 5 inches. This small size is obviously impracticable on account of the danger of loss and the difficulty of filing. Hudson County, New Jersey, uses a form 5½ inches wide and 11 inches long, another odd size.

The size of the requisition and the number of copies used depend entirely upon the purchasing and accounting system. None of the wide variety of requisition forms in use can be recommended as a model because the requirements of various governments are so different. The forms shown herewith are, however, considered representative of the various systems in operation.

The Philadelphia requisition form (Figure 9) is simple, and embodies all the necessary items of information and several supplementary items. This form is issued in two copies, the original being sent to the purchasing office, the duplicate remaining with the requisitioner. The original copy is signed by the requisitioner and approved by the chief clerk of the same department. The approval of the purchasing office is indicated by the signature of the assistant purchasing agent.

Figure 10 shows the special requisition used in Milwaukee for repair work, rental of equipment, and telephone, gas, and electric service. It is issued in four copies, all of which are sent to the



ORIGINAL—Controller's Copy

CITY OF SACRAMENTO
REQUISITION FOR SUPPLIES

Req. Number

To PURCHASING AGENT
PLEASE ORDER
FOR
Date 192
SHIPPING ADDRESS
Estimate for the Month of
SHIP BY FRGT EXP
Parcel

RECORD OF PAYMENT

Line No.	WANTED Quantity	Unit	DESCRIPTION Give accurate description and purpose of intended use	CATALOG REFERENCE	ESTIMATED COST	Disallowed	Amount Approved	Amount Paid
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
			TOTALS					

Claim No. | Line No. | Claim No. | Line No. | Claim No. | Line No. | Claim No. | Line No. | Claim No. | Line No.

To Be Charged Against

I hereby certify upon my own personal knowledge that the articles or services requested hereon are necessary to perform the functions as described above.

I further certify that I have carefully estimated the cost to furnish the articles or services and that the amount set opposite each item is, to the best of my knowledge and belief, adequate to cover the actual cost

Title

CONTROLLER'S OFFICE

Budget Allowance
Encumbrances
Balance
This Estimate
Balance

Approved
With Exceptions noted in column above headed Disallowed. Approval void if actual item or cc exceeds est mate price by more than 10%. Excess requires special approval

Controller

Date

POSTINGS TO ENCUMBRANCE LEDGER

Estimate	Disallowed	Adjustment

ADJUSTMENT

Amt approved Ex. or Can.
Total Amt paid
Adjustment Dr Adjustment Cr.

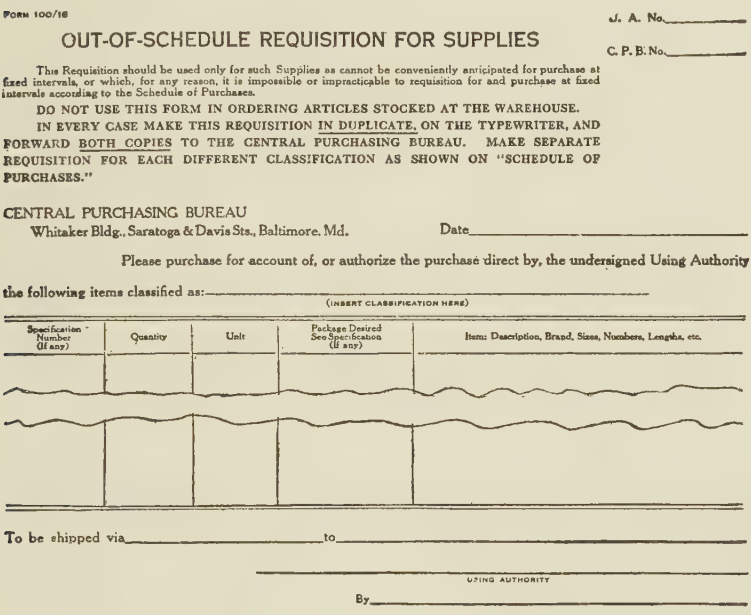
Excess Notices

Doc. No. | Cancellation Notice

Total

FIG. II. REQUISITION FORM, SACRAMENTO, CALIFORNIA (17″×11″ FOLDER)

purchasing office. After being checked, the original and the quadruplicate copies are sent to the comptroller, the duplicate is retained by the purchasing office, and the triplicate is returned to the requisitioning department. The comptroller sends the original to the vendor with voucher attached when payment is made, and keeps the fourth copy as his record. The head and body of all copies are alike. The foot of the requisition, below "total," is



FORM 100/16

J. A. No._____

OUT-OF-SCHEDULE REQUISITION FOR SUPPLIES

C. P. B. No._____

This Requisition should be used only for such Supplies as cannot be conveniently anticipated for purchase at fixed intervals, or which, for any reason, it is impossible or impracticable to requisition for and purchase at fixed intervals according to the Schedule of Purchases.

DO NOT USE THIS FORM IN ORDERING ARTICLES STOCKED AT THE WAREHOUSE.

IN EVERY CASE MAKE THIS REQUISITION IN DUPLICATE, ON THE TYPEWRITER, AND FORWARD BOTH COPIES TO THE CENTRAL PURCHASING BUREAU. MAKE SEPARATE REQUISITION FOR EACH DIFFERENT CLASSIFICATION AS SHOWN ON "SCHEDULE OF PURCHASES."

CENTRAL PURCHASING BUREAU
Whitaker Bldg., Saratoga & Davis Sts., Baltimore, Md.

Date_____

Please purchase for account of, or authorize the purchase direct by, the undersigned Using Authority

the following items classified as:_____
(INSERT CLASSIFICATION HERE)

Specification Number (If any)	Quantity	Unit	Package Desired See Specification (If any)	Item: Description, Brand, Sizes, Numbers, Lengths, etc.

To be shipped via_____ to_____

USING AUTHORITY

By_____

FIG. 12. OUT-OF-SCHEDULE REQUISITION, STATE OF MARYLAND ($8\frac{1}{2}'' \times 11''$)

left blank on the third and fourth copies. On the duplicate this space contains part of the record of the purchasing office.

Another detailed form is that used in Sacramento, California, for monthly estimates (Figure 11). This is issued in triplicate, and all copies are sent to the purchasing agent, thence to the comptroller, who, after approval, returns the duplicate to the purchasing office, and the triplicate to the requisitioner. The two right-hand columns, which on the original are labeled "disallowed" and "amount approved," become a part of the purchasing record on the

duplicate copy, giving the order number and purchase price. The original, retained by the comptroller, is a two-sheet folder, in which all correspondence pertaining to the requisition, order and invoice is filed together. The record of payment is entered on the back cover of the folder.

The state of Maryland uses an "out-of-schedule" requisition (Figure 12) for supplies whose need was not foreseen at the time of submitting the regular quarterly estimate. It is issued in duplicate, both being sent to the purchasing office. The reason for the

Form 1164-1500-4-17

EMERGENCY REQUISITION

To be used only in cases where property, equipment, or life is in danger of loss thru unexpected circumstances.

*Date*_____ *191*___

Purchasing Agent, City of Dayton:

The following supplies or services have been furnished by

Date of Receipt of Goods or Services

ORIGINAL to be taken by Head of Div. to City Manager within 24 hours of receipt of goods or services.

TO

Dep't Req. No.

*Dep't. of*_____

*Div. of*_____

P. A. Req. No.

*Bureau of*_____

Code	Quantity	DESCRIPTION	Price per Unit	Amount

I hereby certify that the above supplies or services were purchased for an emergency, conditions of which were as follows:

Approved: _____
Head of Department

Head of Division

Approved: _____
City Manager

FIG. 13. EMERGENCY REQUISITION, DAYTON, OHIO ($8\frac{1}{2}'' \times 11''$)

expenditure is explained in full by the requisitioner, on the duplicate copy. The state purchasing agent indicates his approval on the duplicate copy of the form which is thereupon returned to the requisitioner.

The using agencies of Dayton are permitted to purchase directly in cases of genuine emergency, without prior authorization

Form 525 1m 6 23

Emergency Store Requisition on Purchasing Agent

Date_____ 192 _____

TO CITY STORE KEEPER

Please deliver at once to bearer, the materials or supplies enumerated below—regular requisition to cover this purchase, of which this is an exact copy, has been forwarded through regular channels.

Dept of_____ Dept. Req. No _____

Div of_____

Bureau of_____

INSTRUCTIONS

Division Heads will make use of this form ONLY in cases of real emergency—any abuse of the privilege will result in its being abandoned.

This form will be made out only as a carbon copy of original requisition, which must be plainly marked—

"EMERGENCY STORES."

Code No	Quantity Required	Description and Specifications	Purpose	Order From	Price per Unit	Order No

I hereby certify that the immediate delivery of above mentioned supplies or material is necessary in order to maintain the efficiency of the work in this Division.

I make this requisition with the firm belief that the unincumbered balance in the Code Funds above noted is sufficient to cover this charge.

_____

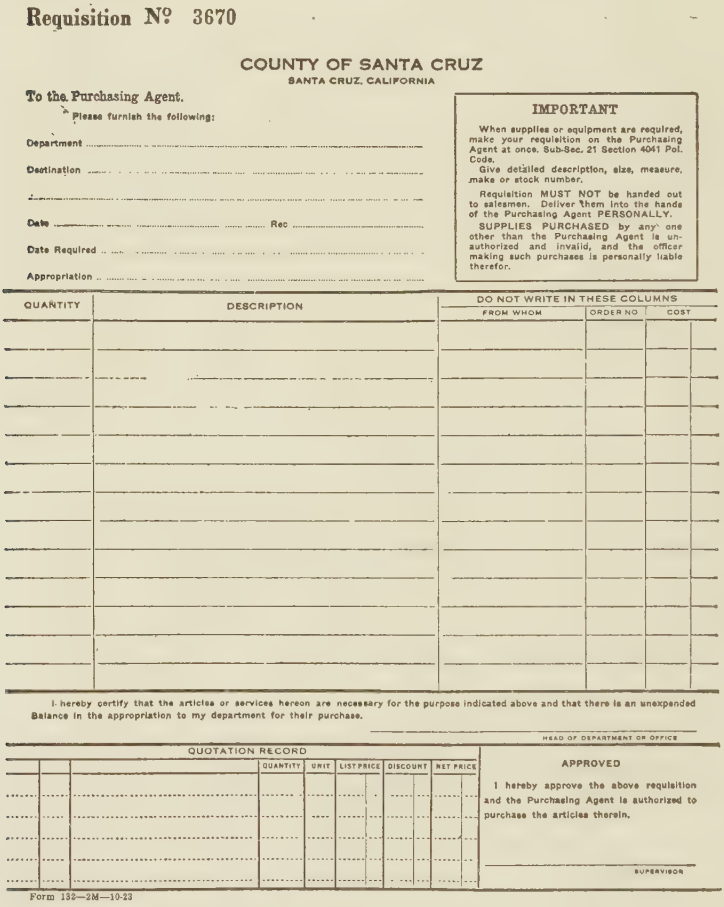
Head of Division.

I hereby acknowledge receipt of the supplies and materials above listed.

_____

FIG. 14. EMERGENCY STORE REQUISITION, DAYTON, OHIO (8½"×11")

from the city manager or purchasing agent. The "emergency requisition" (Figure 13), explaining the circumstances, must be taken to the city manager not later than twenty-four hours after



Requisition No. 3670

COUNTY OF SANTA CRUZ
SANTA CRUZ, CALIFORNIA

To the Purchasing Agent.
Please furnish the following:

Department .....
Destination .....
.....
Date ..... Rec .....
Date Required .....
Appropriation .....

IMPORTANT

When supplies or equipment are required, make your requisition on the Purchasing Agent at once. Sub-Sec. 21 Section 4041 Pol. Code.

Give detailed description, size, measure, make or stock number.

Requisition MUST NOT be handed out to salesmen. Deliver them into the hands of the Purchasing Agent PERSONALLY.

SUPPLIES PURCHASED by any one other than the Purchasing Agent is unauthorized and invalid, and the officer making such purchases is personally liable therefor.

QUANTITY	DESCRIPTION	DO NOT WRITE IN THESE COLUMNS		
		FROM WHOM	ORDER NO	COST

I hereby certify that the articles or services hereon are necessary for the purpose indicated above and that there is an unexpended Balance in the appropriation to my department for their purchase.

HEAD OF DEPARTMENT OR OFFICE

QUOTATION RECORD

			QUANTITY	UNIT	LIST PRICE	DISCOUNT	NET PRICE

APPROVED

I hereby approve the above requisition and the Purchasing Agent is authorized to purchase the articles therein.

SUPERVISOR

Form 132—2M—10-23

FIG. 15. REQUISITION FORM, SANTA CRUZ COUNTY, CALIFORNIA (8½"×11")

the goods or services have been received. This form is approved in duplicate by the manager before reaching the purchasing agent. The latter issues a confirming order to the supplier, and sends the requisitioner the duplicate of the emergency requisition, together

with a copy of the order. Dayton uses also an "emergency store requisition" (Figure 14) covering issues from stores without authorization of the purchasing agent in cases of emergency. The form illustrated in Figure 14 is sent to the storekeeper, who delivers the commodities without official order from the purchasing agent. The requisitioner is not required to explain the emergency in detail as illustrated in Figure 13, since the transaction did not involve the expenditure of additional funds.

Combined requisition and order forms are used by the cities of Saratoga Springs, New York, and East Cleveland, Ohio. The combination order and requisition form purports to eliminate the copying of the description and quantity data from the requisition to the order. This advantage is lost when requisitions from several using agencies are consolidated into a bulk order, for the quantity data and description would necessarily be copied anyway. Then, too, the description given by the requisitioner must as a rule be revised or rewritten by the purchasing office before the order is issued. In either event this form does not reduce the work of the purchasing office.

The requisition form of Santa Cruz County, California (Figure 15), illustrates the use of a printed requisition number, instructions for filling out the form (upper right-hand corner), and the space for listing the quotations upon the basis of which the order was awarded.

CHAPTER VII

PURCHASE NEGOTIATION

FOUR alternative steps are open to the purchasing agency in filling a requisition. Delivery may be made from stores if the requisitioned articles are kept on hand; an order may be issued at once on a standing contract; the commodities may be transferred from some other branch of the government; or a special purchase may be negotiated. We are concerned here only with the procedure of purchase negotiation, the details of which vary with the amount of the expenditure involved and the length of time before delivery is required.

The total amount of the expenditure usually determines whether the purchase negotiation shall be "formal" or "informal." If the amount involved is less than a certain sum established by law, the purchasing agency may solicit and receive price quotations *informally* by mail, telephone, or personal interviews, either with or without newspaper advertisement. If the purchase will exceed that sum, sealed bids are solicited by newspaper advertisements and other forms of publicity, the bids are opened and announced in public, and the order or contract is awarded according to a definite and *formal* procedure.

Time of Initiating the Purchase Negotiation.—As explained in the preceding chapter, the purchasing agent must wait until receipt of a requisition from the using agency before beginning the negotiation of purchase, unless he has authority to anticipate requirements and to ask for estimates for a given future period.[1] If, happily, he has such authority, he will be able to place orders in advance of need by purchasing when the market is "right." By doing so, the purchasing agent can frequently take advantage of favorable market conditions and bring about

[1] See pp. 124, 125.

great reductions in *matériel* costs, as illustrated by the experience of Dayton. According to C. E. Rightor:

> It was apparent early in 1915 that the trend of the market was upward, and plans were then made to buy and store the materials which were to be required, and then to sell them to the successful contractors for the work at prices then prevailing. In October, 1915, 800 tons of reënforcing steel were purchased at $27 per ton, and by the time the bridges for which the steel was needed were begun the market price of steel had gone to $69. Fifty-eight thousand, three hundred barrels of cement, costing $1.37 net per barrel when purchased by the city in 1915, were disposed of to contractors on the Fifth Street, Webster Street and Keowee Street bridges at a much higher price at time of construction. Sewer pipe was bought 84 per cent off the list price, making a saving of $40 per car or an estimated gross saving of $8,000. Water pipe was purchased in 1914 to the amount of 6,278 tons by a long-term contract, at $20.40 per ton, and by the time it was all laid the price had risen to over $25. This low price on water pipe was not equaled or bettered by any municipality that year.[2]

If the purchasing agent has authority to buy in advance of need, he is given a greater incentive for studying the market and for keeping abreast of price trends. Few public buyers do so, either from lack of initiative or lack of incentive. An outstanding exception is the commissioner of purchases and supplies of Detroit, who keeps running charts of market trends in the leading commodities which he is called upon to buy. He can tell at a glance from his charts what has been the past trend; and, from a study of price forecasts, can arrive at a decision on the proper time to go into the market.[3]

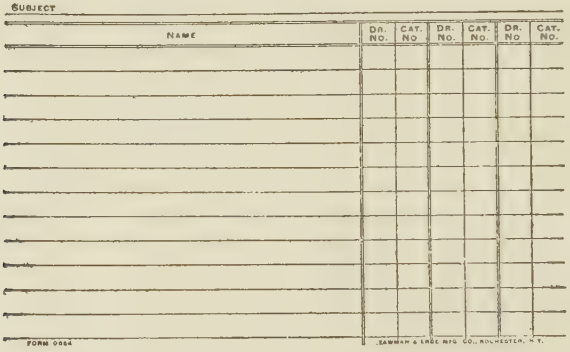
Items which can be bought in large quantities in advance of need naturally divide themselves into two classes: those for which estimates must recurrently be furnished due to changing needs of the using agencies; and those for which past consumption records

[2] *City Manager in Dayton,* p. 199.

[3] For a fuller discussion of this subject, see "The Charting of Market Conditions," by Joseph E. Mills, *The Purchasing Agent,* July, 1927, pp. 729-733.

furnish sufficient data on the amount to purchase. Of the latter group, the purchasing agent can keep an ample supply on hand at all times, without risk of obsolescence. The procurement of such staple articles is best handled in connection with a central storage system and a revolving supply fund, as explained in Chapter X.

Sources of Supply.—One of the prerequisites to purchase negotiation, either formal or informal, is knowledge of the best sources of supply. Most nonpatented commodities are available


SUBJECT

NAME	DR. NO.	CAT. NO	DR. NO.	CAT. NO.	DR. NO	CAT. NO.

FIG. 16. LIST OF SUPPLIERS FOR A CERTAIN COMMODITY DAYTON, OHIO (6″×4″)

from competitive sources. The wide-awake purchasing agent constantly revises his supply lists to keep them up-to-date and complete. Too often the government purchasing agent has depended upon former suppliers of established reliability instead of keeping on the lookout constantly for new and better sources of supply, and has depended solely on local jobbers or wholesalers instead of establishing contacts with the manufacturer. Many times competition has been limited to a hand-picked list. Suppliers have been known to furnish an initial order below cost in order to gain the confidence of the buyer, and then to capitalize on that confidence on future orders. The skilled purchasing agent knows that a supplier, repeatedly underbid by a competitor, may later, on account of a slump in his regular business or a change in production methods, be the "lowest and best bidder." The skilled

buyer also studies market conditions and production and distribution methods as a means for knowing whether the government is being victimized through collusion of the bidders, and whether a saving could be made by rejecting bids and getting new bids or buying on the open market. The public buyer has no more important task than the compilation of an accurate and representative supply list, and sentiment, friendship, and partisanship should

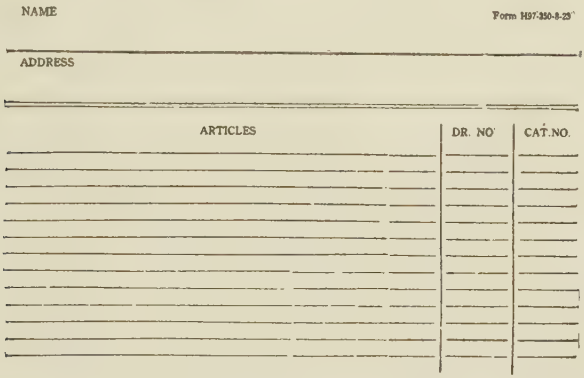


FIG. 17. LIST OF COMMODITIES FURNISHED BY CERTAIN SUPPLIER (CROSS REFERENCE TO FIG. 16), DAYTON, OHIO (6″×4″)

have no voice in deciding what firms shall be included in or omitted from it.

Many purchasing agents compile supply lists from their memory of past purchases, but this method is haphazard and unsatisfactory. The list should be compiled systematically, not only from past purchases, but from catalogues, advertisements in trade papers, directories of manufacturers, contacts with salesmen, and direct requests from suppliers who ask to be included. The plan followed in Dayton is simple and can easily be kept up-to-date. A subject card (Figure 16) lists the suppliers of each commodity, with reference to their catalogues on file. Another card (Figure 17) is maintained for each supplier, listing all the commodities or commodity classes which he can furnish. Each supplier is listed on both cards, one serving as a cross reference to the other. Upon

receipt of a requisition for a staple commodity, the purchasing office finds its supply list upon the subject card, with little effort. If the requisitioned article is patented, the supply source will likely be indicated on the requisition. In purchasing an unfamiliar commodity, the location of possible suppliers may require a search through directories, consultation with other buyers, or the solicitation of help from trusted salesmen or from trade papers. Such search need be made only once if a card index record is maintained for future use.

Publicity Methods.—The first step in purchase negotiation is informing suppliers of the purchase requirements.

1. The Bulletin Board.—One of the leading publicity measures is the use of a bulletin board, usually placed in the purchasing office and open to inspection by the public during business hours. All pending purchases are posted on the board two or more days before the order is placed and all interested suppliers are invited to submit prices. Bulletin boards are used by the United States Navy Department, by a score of cities, and by several states and counties.

Cincinnati uses a bulletin board in conjunction with a buying schedule, which is furnished to all interested suppliers (Figure 18). The city's requirements have been divided into six groups,

PURCHASING SCHEDULE
OF THE CITY OF CINCINNATI

MONDAY 10 A M	TUESDAY 10 A M	WEDNESDAY 10 A M	THURSDAY 10 A M	FRIDAY 10 A M	SATURDAY 10 A M
Groceries	Coal	Harness and Saddlery	Drugs and Chemicals	Janitor's Supplies	Dry Goods and Notions
Butter	Asphalt	Rubber Goods, all kinds	Hospital Supplies	Laundry Supplies	Wearing Apparel
Eggs	Brick	Tents and Awnings	Surgical Supplies	Disinfectants	Regalia
Flour	Cement	Hose	Electrical Supplies	Paper Goods	Bedding
Yeast	Lime	Belting	Gas Appliances	Paper	Carpets
Meats	Sand, all kinds	Engine Room Supplies		Binding	Oil Cloth and Linoleum
Lard	Stone, all kinds	Metals, all kinds		Printing	Shades
Fish	Paving Materials	Castings, all kinds		Office Supplies	Shoes
Poultry	Sewer Pipe	Pipe and Pipe Fittings		Stationery	Slippers
Milk	Auto Supplies	Machinery Supplies		Drawing Materials	Leather and Findings
Cream	Greases and Oils	Hardware		Engineering Supplies	Furniture
Fruits	Gasoline	Plumbers' Supplies		Photo Supplies	Seeds and Plants
Vegetables	Lumber and Mill Work				Miscellaneous
	Painters' Supplies				
	TUESDAY 2 30 P M				
	Hay				
	Grain				
	Forage				

NOTE:—Requisitions for these supplies are posted on Bulletin Board two days in advance
Bidders will use our printed forms and envelope, seal their bids and deliver to Purchasing Department at any time prior to hour specified

YOUR SALESMAN NEED COME BUT ONCE A WEEK. WE WELCOME YOUR COMPETITION ERNST VON BARGEN, Purch. Agt.

FIG. 18. PURCHASING SCHEDULE, USED IN CONNECTION WITH BULLETIN BOARD, CINCINNATI, OHIO (9″×6″)

and each group is assigned for purchase on a certain day of the business week. The city agrees, for instance, that any needed groceries will be purchased on Monday of each week and that bids may be submitted until 10 A.M. on that day; similarly, drugs are purchased every Thursday, dry goods on Saturday, etc. Notices of pending purchases are posted on the bulletin board at least two days in advance of the date of purchase. Since all grocers know that any needed groceries will be purchased on Monday, they need consult the bulletin board only each Friday or Saturday. Likewise for the other commodity groups. Requisitions received too late for forty-eight hours' notice on the bulletin board are held over until the following week, except in cases of emergency, when purchase is made immediately. A somewhat similar purchasing schedule has recently been adopted in Buffalo. Indianapolis and New York City have bulletin boards with a column for each day of the week, but the column merely indicates the day on which the purchase will be made and has no reference to a buying schedule as in Cincinnati.

The bulletin board method, and especially that followed in Cincinnati, has the obvious advantage of advertising the purchase with a minimum of expense to the government. It should not be depended upon, however, as the sole means of publicity. The bulletin board is usually consulted only by local dealers. Manufacturers and wholesalers are seldom enough interested to send a representative to the purchasing office each week although they may compete if solicited by some other means. The purchasing agent who relies solely upon the bulletin board to secure the competition required by law is likely to deal only with local retailers and may pay higher prices than necessary. The bulletin board notice is also of limited value in the purchase of special or unusual articles, since it rarely comes to the attention of any save suppliers of staple articles.

Nor is the bulletin board of much help to states. The class of dealers who consult it are usually equipped only for local business. Then, too, the capital is usually at the geographical, rather than the commercial, center of the state, so that local suppliers are

few in number. But Idaho uses a bulletin board to advantage, because Boise, the capital, is also the state's commercial center.

2. Newspaper Advertisements.—There is a marked difference between private and public purchasing methods, in the use of newspaper advertisements. All governments use newspapers more or less regularly to advertise pending purchases while private corporations rarely use them. The latter often wish to keep their plans secret and so may ask for bids only from a few dependable suppliers. Governments, on the other hand, have nothing to conceal and everything to gain by securing as widespread publicity and competition as possible.

The use of newspaper advertisements is almost invariably required by state or local law. Competition on purchases by the state and local governments through advertisements is a constitutional requirement in some states; in other states, it is required by statute. Most city charters make this requirement, whether purchasing is centralized or decentralized, and any ordinance on purchasing generally provides in detail for advertisement in accordance with the charter or state law.

The newspaper advertisement is employed to prevent dishonesty in purchasing. Without it, the purchasing agent might limit competition to his friends and might connive with them to defraud the government. Theoretically, this is impossible when all competitive suppliers are notified publicly and have an equal chance to submit bids.

In fact, however, newspaper advertisements fail of their intended function. They are seldom seen and read by those to whom they are addressed, except by those few suppliers who employ press-clipping services to furnish them with all public advertisements. Experience has shown that the newspaper advertisement arouses very little competition. It has very generally become a matter of form, a mere gesture in compliance with the law, and is not seriously expected to attract competition. Then, too, the insertion of advertisements for the required length of time slows up the purchasing procedure. Private corporations would not brook a delay of three weeks while advertising for bids, as

some governments are required by law to do. The requirement for newspaper advertising is largely responsible for the frequent branding of public buying as slow and inefficient. A third objection to the newspaper advertisement is its cost. In New York City approximately $180,000 is appropriated each year for advertising in private newspapers, while the advertisements carried regularly in *The City Record,* the daily paper published officially by the city, cost about $40,000 per year additional.[4]

A dishonest purchasing agent, while complying with the law by advertising, can "tip off" his friends and, by restricting competition to them, can achieve his fraudulent purpose nevertheless. Furthermore, it is often possible to sidestep the law by dividing the total purchase into small orders, each less than the maximum amount at which newspaper advertisements are required. This is impossible on equipment costing more than this amount per item, but it can be done with commodities of low unit cost. On rush orders, it may be more economical to avoid the delay and the cost of advertising by this method, even though the unit cost be higher on small-lot purchases. Frequently, however, the "splitting" of orders is a device for evading the law requiring competitive bids. For example, a survey of the purchasing system in Toledo revealed the fact that on August 9, 1927, the purchasing agent issued two orders for crushed stone to the same company and at the same price; and in 1926 three orders were issued for hay to the same company on the same day, each order being less than $500 (the maximum amount for informal purchases).[5]

The state law of New Jersey requiring newspaper advertisements can be disregarded only in emergencies and by a four-fifths vote of the council or commission of a city. A three-fourths

[4] The deputy supervisor of *The City Record* estimates that the advertisements carried in the official paper would cost the city about $1,000,000 per year if inserted in outside papers, at the prevailing advertising rates. In computing the cost of advertising in New York City, it must be borne in mind that a part of the annual appropriation for this purpose is spent by the board of elections and by the counties, and cannot be charged against advertising of contracts.

[5] "Survey of the Division of Purchases and Supplies," supplement to *The Toledo City Journal,* March 3, 1928, p. 9.

vote of the board of aldermen is required in New York City to secure exemption from newspaper advertising for competitive bids on expenditures in excess of $1,000. Nevertheless, using departments make liberal use of this means for evading the charter restriction, for such requests are seldom denied by the board of aldermen. The amount exempted from competitive bidding in this way totaled nearly $2,000,000 in 1926. The charter of Minneapolis, although requiring formal advertisement of amounts over $1,000, permits the purchasing agent to waive this provision if in his discretion circumstances warrant. Formal newspaper advertising may be dispensed with in Milwaukee by majority vote of the central board of purchases, provided the board publishes the reasons therefor in its minutes and secures a two-thirds vote of approval by the common council. If failure to purchase promptly will involve a loss to the city, the purchasing agent of St. Paul may place orders in excess of $500 without advertising, with the written consent of the mayor and comptroller, and approval of the city council. The consent of the comptroller is sufficient authority to waive newspaper advertising in St. Louis for orders over $100. But with a few exceptions, most purchasing laws lay down a hard and fast rule which can be disregarded only in emergency.

The maximum expenditure without advertisement is most commonly set at $500 or $1,000. But all orders or contracts over $100 must be advertised in Allegheny County, Pennsylvania. The maximum amount ranges from this up to $2,000 in Los Angeles.

No standard form of advertisement has been agreed upon.[6] Sometimes the advertisement gives the complete specification of the commodity or service to be purchased, with detailed instructions for submitting bid, amount of surety required, etc. In other cases it merely gives notice that a certain purchase is to be made on a certain date, and invites all interested suppliers to call at, or write to, the purchasing office for specifications and blank for

[6] A form of advertisement for construction contracts has been proposed as standard by the *Engineering News-Record*, and may be secured upon request from the publishers of that magazine.

submitting proposal. A construction project is usually advertised in detail. The advertisement generally states that the government reserves the right to reject any and all bids.

If the government issues an official paper, it is naturally used as the vehicle of advertisement. If the law requires that some privately owned paper be selected as "official," the selection is usually made on the basis of the lowest competitive bid per column inch of advertising matter and a contract is sometimes awarded for a year or longer. The law sometimes requires the official paper to be one of "general" circulation, or in states, of "state-wide circulation."

The required number of advertising media and the required number of insertions for each advertisement vary considerably. Purchases for the state of Delaware must be advertised in at least six papers of state-wide circulation. In Pennsylvania, state purchases of general supplies must be advertised three times in twelve newspapers over a period of three weeks preceding the date of

Form No. 1B

DEPARTMENT OF PURCHASE
City Hall
Camden, N. J.

.....

Gentlemen:

You are hereby advised that The Department of Purchase will receive bids for.....

until 10 A. M., on.....

If you are interested you may obtain proposal forms upon personal application at Department of Purchase, City Hall.

Yours truly,
H. P PELOUZE, Purchasing Agent.

PRESENT THIS CARD FOR PROPOSALS

FIG. 19. NOTICE TO BIDDERS TO CALL FOR SPECIFICATIONS AND PROPOSAL FORM, CAMDEN, NEW JERSEY ($5\frac{1}{2}'' \times 3\frac{1}{4}''$)

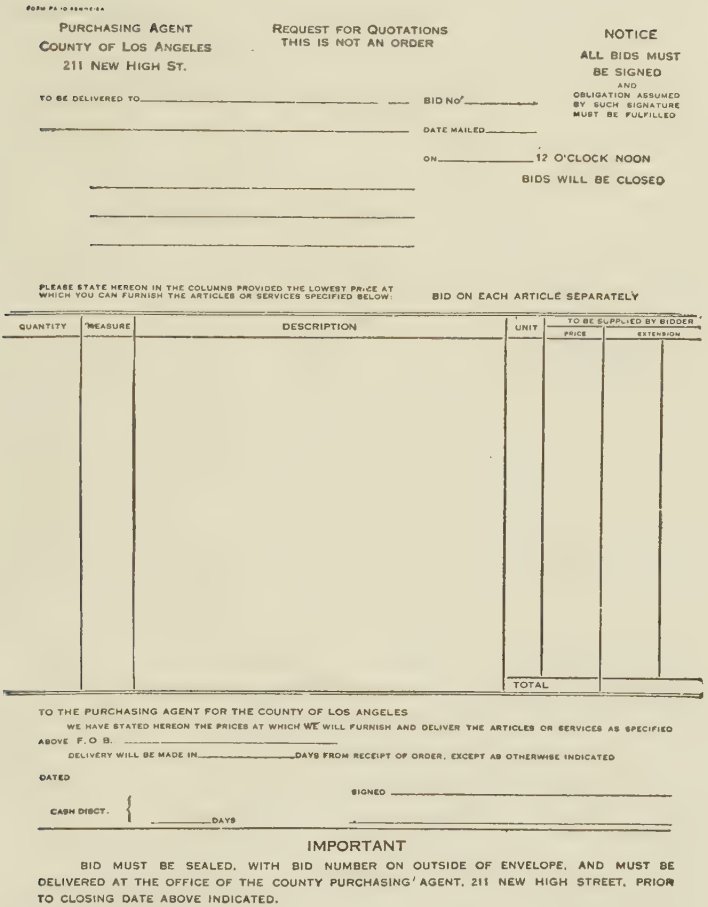
award; for printing supplies, advertisements are required in eight newspapers for three insertions. Purchases for the state of Montana must be advertised for at least twenty days. The Massachusetts commission on administration and finance, the state purchasing agency, has power to regulate all advertisements and to adapt the form of advertisement and number of insertions to the

circumstances involved. All bills for public advertising are checked by the comptroller who is a member of the commission. The Cincinnati ordinance requires one insertion in the municipally published official paper for orders over $500. In Milwaukee a purchase in excess of $1,000 is advertised once and at least six days preceding date of award. The San Francisco ordinance requires purchases over $1,000 to be advertised twice in the official paper; the second insertion must appear at least five days before the opening of bids.

3. Postal Card Notices.—Figure 19 illustrates a third publicity method. It reduces the expense of printing and distributing specifications and proposal blanks, since they are furnished only to those firms who request them in reply to this notice. This plan cannot be followed in emergencies, however, when prices must be obtained and the order awarded with the least possible delay.

4. Direct Requests for Quotations.—The most common, and by far the most effective, form of publicity is the direct request for quotations. Every government, so far as known, uses the direct request for quotations for a part if not all of its purchases, as a supplement to the other publicity methods. In small purchases and in emergencies, dealers are often notified, and prices are secured, by telephone without correspondence; but in most cases a form called an "inquiry," "invitation to bid," or "request for quotation" is sent by mail to all, or a selected list of, suppliers. This form gives a detailed description of the commodities or services required by the government, and solicits price quotations. The price quotations are filled in by the supplier who returns the inquiry form as his bid. Inquiries are sent out on either formal or informal purchases, but the size and arrangement of the forms and the procedure followed differ considerably, as shown below.

(*a*) *Size of inquiry forms.*—The inquiry or request for quotation is usually 8½ inches wide and 5½, 11, or 14 inches long. For informal purchases, the inquiry is generally printed on flimsy paper stock so that several carbon copies may be prepared and sent to several firms with the least typing effort. Through the use of the "fanfold" system, the New York City department



PURCHASING AGENT
COUNTY OF LOS ANGELES
211 NEW HIGH ST.

REQUEST FOR QUOTATIONS
THIS IS NOT AN ORDER

NOTICE
ALL BIDS MUST BE SIGNED AND OBLIGATION ASSUMED BY SUCH SIGNATURE MUST BE FULFILLED

TO BE DELIVERED TO _____ BID NO. _____

DATE MAILED _____

ON _____ 12 O'CLOCK NOON BIDS WILL BE CLOSED

PLEASE STATE HEREON IN THE COLUMNS PROVIDED THE LOWEST PRICE AT WHICH YOU CAN FURNISH THE ARTICLES OR SERVICES SPECIFIED BELOW: BID ON EACH ARTICLE SEPARATELY

QUANTITY	MEASURE	DESCRIPTION	TO BE SUPPLIED BY BIDDER UNIT	PRICE	EXTENSION
			TOTAL		

TO THE PURCHASING AGENT FOR THE COUNTY OF LOS ANGELES

WE HAVE STATED HEREON THE PRICES AT WHICH WE WILL FURNISH AND DELIVER THE ARTICLES OR SERVICES AS SPECIFIED ABOVE F. O. B. _____

DELIVERY WILL BE MADE IN _____ DAYS FROM RECEIPT OF ORDER, EXCEPT AS OTHERWISE INDICATED

DATED

SIGNED _____

CASH DISCT. _____ DAYS

IMPORTANT

BID MUST BE SEALED, WITH BID NUMBER ON OUTSIDE OF ENVELOPE, AND MUST BE DELIVERED AT THE OFFICE OF THE COUNTY PURCHASING AGENT, 211 NEW HIGH STREET, PRIOR TO CLOSING DATE ABOVE INDICATED.

FIG. 20. REQUEST FOR QUOTATIONS ON INFORMAL PURCHASES, LOS ANGELES COUNTY, CALIFORNIA ($8\frac{1}{2}'' \times 11''$)

of purchase prepares thirteen copies of the inquiry at a single typing; ten are sent to prospective bidders, while one remains as the office copy, a second is displayed on the bulletin board, and a third is sent to the requisitioning department. In formal purchases, a specially prepared copy of the inquiry is generally sent to each prospective supplier.

A "national standard inquiry form" is recommended by the

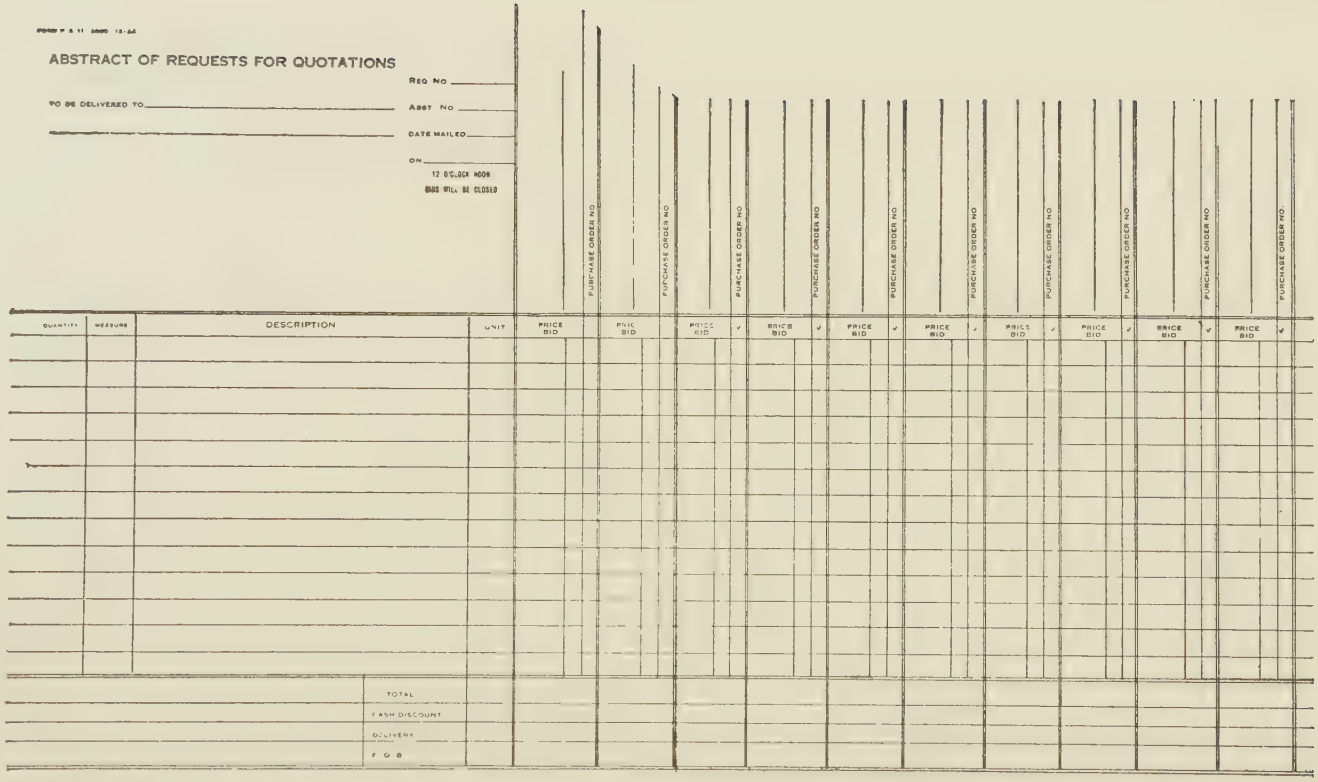
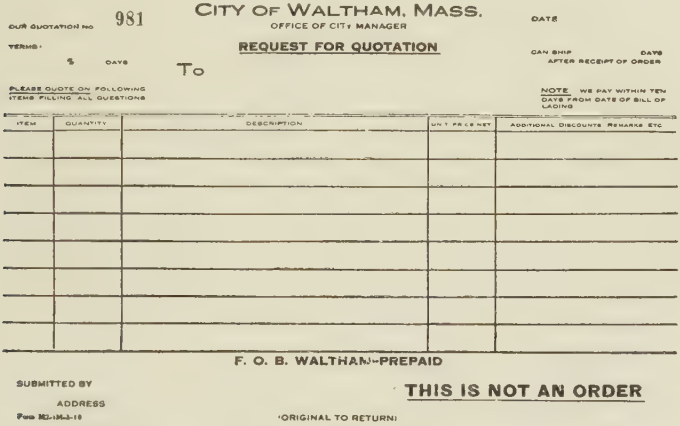


FIG. 21. ABSTRACT OF REQUESTS FOR QUOTATIONS AND RECORD OF BIDS SUBMITTED, LOS ANGELES COUNTY, CALIFORNIA ($16\frac{1}{2}'' \times 11''$ FOLDER)

division of simplified practice, United States Department of Commerce, as a part of simplification project number thirty-six. The standard inquiry is 8½ inches wide and 7, 11, or 14 inches long, depending on the space required for description of the proposed purchase. Seven "zones" are prescribed, each to contain certain characters and information; the precise arrangement and context of the material in each zone is to suit the needs of the individual user. The state of Maryland has adapted its inquiry to the national standard form (See Figure 23).



OUR QUOTATION NO. 981

CITY OF WALTHAM, MASS.
OFFICE OF CITY MANAGER

DATE

TERMS:

REQUEST FOR QUOTATION

% DAYS

CAN SHIP DAYS AFTER RECEIPT OF ORDER

To

PLEASE QUOTE ON FOLLOWING ITEMS FILLING ALL QUESTIONS

NOTE WE PAY WITHIN TEN DAYS FROM DATE OF BILL OF LADING

ITEM	QUANTITY	DESCRIPTION	UNIT PRICE NET	ADDITIONAL DISCOUNTS REMARKS ETC

F. O. B. WALTHAM—PREPAID

SUBMITTED BY

ADDRESS

THIS IS NOT AN ORDER

Form M2-1M-3-18 ORIGINAL TO RETURN

FIG. 22. REQUEST FOR QUOTATION, WALTHAM, MASSACHUSETTS (8″×5½″)

(*b*) *Specimen inquiry forms.*—Los Angeles County sends out requests for quotations on the form shown as Figure 20. This is printed on 8½ inch x 11 inch flimsy paper stock, so that a number of copies can be typed at one time. The original copy (Figure 21) is a folder and as many copies of the inquiry as needed are inserted between the top and back before typing. The form shown as Figure 21 becomes the record of the inquiries sent out and is also the abstract of the replies received. The names of the firms who were invited to bid are filled in along the upper right-hand zone, and their respective price quotations are copied in the proper columns when the bids are opened.

The request for quotation used by Waltham, Massachusetts (Figure 22), is issued in triplicate. Two copies are sent to the supplier, who returns the original with his quotation and retains the duplicate for his records. The triplicate remains in the purchasing office as the "follow-up" copy. The purchasing agent writes or telephones those firms which are tardy in submitting bids to determine whether they wish to compete. Very few governments follow such a detailed system for numbering each in-

Form 100/28

INQUIRY

FROM THE CENTRAL PURCHASING BUREAU
STATE OF MARYLAND
TELEPHONE PLAZA 5750 51

If further information is required call _____ Buyer

O. S. Number _____

22 Light Street
BALTIMORE, MD.

Date _____

INQUIRY SUBMITTED BY ABOVE

To _____

_____

_____

Inquiry to be returned by 12 M. _____

THIS IS NOT AN ORDER

PLEASE NOTE CAREFULLY

This inquiry implies no obligation on the part of the Bureau.

The Bureau reserves right to increase or descrease the quantities of any item or items by 10%.

Right is reserved to award by item or lot.

Fill in complete information before returning.

If substitutes are offered, make full explanation. Do not quote on articles you cannot supply.

Shipping Point _____ Is Delivered Price Given? _____

TERMS— Net Cash _____ Days _____ % _____ Days _____ Including Containers

Does Price Include Containers? _____ Are Containers Returnable? _____

QUOTATION TO BE BASED ON SHIPMENT F. O. B. _____

ITEM No.	ITEMS AND SPECIFICATIONS	*	QUANTITY	UNIT	NET UNIT PRICE	TOTAL	

*Check in this column indicates shipment can be made from stock.

Delivery of other items as follows: _____

Prices subject to withdrawal. _____

Firm Signature _____

By _____

FIG. 23. REQUEST FOR QUOTATION, STATE OF MARYLAND (8½"×11")

quiry or for following it up. The form itself, however, is simple and compact, and sets forth all necessary information.

The inquiry form used by the state of Maryland (Figure 23) has many commendable features. It is attractively arranged and is

PROPOSALS FOR FURNISHING SUPPLIES TO CALIFORNIA STATE INSTITUTIONS AS NAMED BELOW

FIG. 24. FORM FOR SUBMITTING BID ON INSTITUTIONAL REQUIREMENTS, STATE OF CALIFORNIA (19″×12″)

clear and understandable. It provides a special column which, when checked by the bidder, indicates that the commodities can be delivered promptly from stock. It has the further advantage of bringing the quantity and unit columns in juxtaposition to the columns for unit-price and total-price quotations, thus facilitating the work of price computation by the bidder and by the purchasing office.

Figure 24 illustrates the blank used by the state of California in receiving quotations for institutional requirements. The required items, with brief specifications, are listed in the first column, while each succeeding column shows the quantity of each item required by the respective institution whose name and post-office and delivery address are given at the head of the column. Each bidder quotes his price on the total quantity as given at the right. The bidder cannot select one or more institutions most convenient for delivery, but must bid on supplying all institutions listed on the blank. The general conditions of purchase and signature of the bidder are given on a separate sheet, which is made a part of the bid.

The city of East Cleveland, Ohio, uses a special form of request for quotations on printing (Figure 25). This is a skeleton form needing only to be checked or filled in to give complete specifications. Several copies of this form may be typed and sent out at one time to competing printers. The original copy, slightly different in phraseology, becomes the order or "instructions to print" and is sent to the lucky bidder, giving him an exact copy of the specifications upon which he bid. Each printer thus bids on precisely the same work, which is seldom true if instructions and specifications are given verbally. Marin and Santa Cruz counties, California, have special forms for receiving bids on job printing and blank books. These are equally practicable, although less detailed than the East Cleveland form.

In 1927, the United States government adopted three standard forms, used, respectively, for inviting bids on construction contracts, and for submitting bids on both construction and supply contracts, which had been drawn up by the Interdepartmental

Request For Quotations

City of East Cleveland, O.

Purchasing Department Eddy 7590

For ..... Dept.....

Est. Period .....

Dept. Head

Pur. Agent

These signatures are not authority to print

Mr. Printer: On this form you will be guided only by specifications checked.

☐ *1* Refer to Job and Order No. .....

Complete Form No.

☐ *2* Printed form No..... to appear at bottom of set-up (use ciphers)

☐ *3* Give us Quotations in accordance with the specifications checked below

☐ *4* Quotations should be in by..... .....192....

☐ *5* Suggestions regarding improvements on the proposed job will be welcome.

Paper

☐ *6* Stock— ☐ Book ☐ Bond ☐ News ☐ ..... ☐ ....

☐ *7* Weight ☐ Paper that will take ink.

☐ *8* Samples of paper should be furnished by printer to prevent discrepancy.

☐ *9* Size. Top edge .... Side.....

Quantity

☐ *10* .....Original copies ....Duplicate copies in each set.

☐ *11* ..... Number of copies on same sheet.

☐ *12* Colors, ... original ....1st dup. .....2nd dup. .....3rd dup.

Binding

☐ *13* Padded on: .... edge ☐ Reinforced with cheesecloth.

☐ *14* Bound: ☐ saddle stitched ☐ flat stitched ☐ sewed ☐ ..... .

☐ *15* .. .. sets in each pad. (if no carbons, one original equals one set.)

☐ *16* Cover stock. (back only)[1] ☐ press board. ☐ tag board. ..... other.

☐ *17* Trimming. ☐ after binding — ☐.....

Printing

☐ *18* Punched

☐ *19* Perforated at ..... ☐ on original. ☐ on 1st. ☐ on 2nd. ☐ on 3rd. dup.

☐ *20* Consecutively numbered: ..... start with no. .. .. Number color .....

☐ *21* Ruling- .... Special Lettering

☐ *22* Printing on back of..... page

☐ *23* Print copies: ☐ all the same ☐ alter.... .... copies

Dup. copies ☐ all the same ☐ alter..... copies. .. .. . copies blank

☐ *24* Type .... size. .. .. kind ☐ Black-face.

☐ *25* Electro types or cuts furnished by printer. ....

[To be delivered to us with the job and to become our property.]

☐ *26* Ink: .... Color ....

Proofs

☐ *27* For additional instructions see copy, which is the general set-up. Printer should not present stone proofs until he has first corrected same.
The right to make minor changes or alterations without extra charge will be reserved by us.
Printers must not proceed to press with the job unless our O. K. appears on the face of the proof

Job Granted

☐ *28* .....;... ☐ proofs presented ☐ corrected. ☐ O K 'd. ☐ returned

☐ *29* .... sets to be wrapped in each package for delivery

☐ *30* Copy of printed form or set must accompany printers invoice.

RETURN THIS BLANK STATING YOUR QUOTATION HEREON ALSO RETURN COPY

If you are granted the job an exact duplicate copy of the above specifications will be sent you with instructions to proceed.

Date 192

The .... will prepare and deliver the above job
Printing Company

for $..... in accordance with specifications as indicated and deliver complete .....days after receipt of order.

by.....
Signature

If job cannot be completed within ..... days purchaser reserve right to cancel order.

1-F-4-3-24-1000 sets-200 orders-McK-1688

FIG. 25. REQUEST FOR QUOTATIONS ON PRINTING, EAST CLEVELAND, OHIO ($8\frac{1}{2}'' \times 11''$)

Board of Contracts and Adjustments, one of the boards operating under the chief coordinator.[7] These forms are now generally used in purchases of the federal government.

(*c*) *Contents of the inquiry and proposal forms.*—The in-

[7] *Standard Forms, Nos. 20, 21, and 31.*

quiry and proposal forms should set forth the following information:

(*1*) *Inquiry and requisition numbers.*—The quotation is sometimes given a serial number, which may be stamped or printed thereon (See Figure 22). Generally, however, the inquiry forms bear only the number of the requisition or requisitions which they are to fill, but sometimes such reference is omitted.

(*2*) *Name and address of supplier.*—This is generally filled in by the purchasing office if the quotation is informal. If a record is kept of the firms asked to bid, replies can be checked as received and failure to reply can be followed up if necessary. In formal proposals, the supplier fills in his own firm name and address, in connection with any required signature, statement or affidavit.

(*3*) *Time limit for submitting quotations.*—The inquiry generally states the final date and hour for submitting bids (See Figure 20), but this may be omitted on informal quotations. The closing hour is invariably stated for formal purchases, either in the newspaper advertisement, on the proposal blank, or on the envelope in which the bid is submitted.

(*4*) *Delivery terms.*—In a small city, county, or state, where the using agencies are within trucking distance of a central point, the place of delivery need not be stated on the inquiry form. But where the using agencies are widely separated, the supplier must know where delivery is expected before he can submit an intelligent price quotation.

The time of delivery should also be known by the supplier. This determines whether the order can be supplied from stock or will require special manufacture, and in the latter event, whether it would be a "rush" order in the factory. The stipulated delivery date should be the date when delivery is actually required. If this is perfunctorily stated, and if the stipulation frequently represents a date impossible of performance, the supplier is likely to disregard it. Carelessness in this matter is often the basis for disappointments in delivery and the resultant disputes and litigation between the buyer and the seller. A reputation among vendors

for truth and accuracy in stating delivery date is a most valuable asset of a purchasing office.

The frequency of delivery, if known, should also be stated. The total cost of delivery will depend upon whether delivery is required weekly or monthly or whether the entire order can be delivered in one lot.

Sometimes alternate prices are requested f.o.b. point of origin, and delivered to the using agency. Alternate quotations enable the purchasing agent to compute whether it would be more economical to have delivery made by the supplier or by the government's own transportation facilities. Some governments, for example the states of New York and Virginia, require all orders to be delivered and receive quotations only on that basis (See also Figure 22).

To facilitate this plan, New York state has been divided into seven shipping zones. The bidder is permitted to quote separate prices for delivery within each zone. If his bid is accepted for zone 7—Hudson River division, for example—he is thereby obligated to deliver to any state agency in that zone at the price stated in the contract. By having all bids on the basis of f.o.b. destination, the contractor assumes responsibility for delivery and for adjustment of claims for shortage or damage in transit. The government is also spared the work of auditing and paying bills of lading. The Federal Purchasing Board favors buying on this basis, except where the government can save transportation charges by delivery over land-grant railroads. This matter is of prime importance to some cities, which lack authority to sue a transportation company for adjustment of damages incurred in transit outside the state. If goods are damaged, the city is often helpless unless the consignor or the carrier is willing to arrange adjustment on his own responsibility.

The state of Maryland requests all quotations f.o.b. Baltimore. All except three of the one hundred sixty using agencies of the state are located in or within trucking distance of that city, and 80 per cent of the state's purchases are made there. A great deal of clerical work is eliminated both for the purchasing agency and

for the supplier by having all bids based on one central delivery point.

The states of New Jersey and Ohio avoid later disputes by stating on their inquiry forms: "It is understood that the weights and measures of the department or institution are to govern deliveries."

(5) *Commodities to be purchased.*—The inquiry form should give a definite catalogue reference, or the specification of each commodity to be purchased. If standard specifications have been adopted, these can be attached to, and made a part of, the inquiry, or copied or pasted in the space for description. If the inquiry is being sent to a former supplier, mere reference to the specification by number may suffice.

The inquiry form should provide space for stating the quantity wanted. Maryland on its inquiry form "reserves the right to increase or decrease the quantities of any item or items by 10 per cent." A similar statement is one of the conditions of purchase by New York state.

The unit of measure is generally given to indicate whether the price quotation is to be based on the pound, case, gallon or ton.

In case either of two qualities or articles would serve equally well, alternative quotations are sometimes solicited. The choice may thus be postponed, until the price quotations have been received and compared as a purchasing determinant.

In some cases, the supplier is asked to submit his price on each item rather than a lump-sum price on the entire list of items. The purchasing office should have comparative quotations on each item, whether the award will be per item or per group. Two lump-sum quotations may be almost identical, but may show a wide price divergence on specific items, and the government may benefit, therefore, by splitting the award among the suppliers who were the low bidders on respective items. To follow this practice consistently may, however, be unfair to suppliers. If each supplier receives the order only for the item or items on which he submitted the lowest bid, his margin of profit may be nil. The fairer plan is to receive alternate bids on the entire lot and on

specific items, and then award the entire order to the supplier whose item bids are consistently the lowest.

But governments should beware of "balanced bidding." By this method suppliers frequently submit a lower-than-cost bid on certain items in order to show a low average bid and thereby secure the order. On construction products, bidders are often "tipped off" that the government will not really require certain items; they therefore submit on such items a bid which is unreasonably low. If such items are eliminated from the contract when construction is under way, the profit to the contractor is greatly increased.

The commodities listed on the inquiry should be as homogeneous as possible. If small quantities of miscellaneous items are to be purchased, it is sometimes more economical to confine competition to jobbers or retailers who are prepared to furnish the entire order. But if large quantities are to be procured, each inquiry should list only a single class of commodity. Quotations can then be solicited from wholesalers or manufacturers who may not be in position to furnish items in other commodity classes. Many public purchasing agents in the past have followed the course of least resistance by disregarding commodity classes, combining all the requisitions received each day, and then asking for quotations on the consolidated list. This method is likely to be uneconomical if the quantities to be purchased are large enough to warrant negotiation with wholesalers.

(6) *The price quotation.*—Columns are provided at the right of the form for the price quotation. This is sometimes represented by three columns, headed "unit," "prices," and "amounts," respectively; some forms have two columns for "unit price" and "amount."

(7) *The discount terms.*—The supplier is asked to state the discount allowed for prompt payment (See Figures 20, 22, and 23). The inquiry form used by the New York City department of purchase states that invoices "will be subject to a cash discount of two per cent," for payment within thirty days, "unless prices are marked otherwise hereon." Buffalo follows a similar prac-

tice, and further requires bidders to state price and total discount. Chain discounts are not considered.

(8) *Statement and affidavit by the supplier.*—If the quotation is for an informal or open-market purchase, the signature of an officer of the supplying firm is often sufficient. The signature may be prefaced with a brief statement such as "we have stated hereon the prices at which we will furnish and deliver at places named above the articles or services as specified."

(9) *Number of copies of quotation.*—In most cases, the bidder returns the inquiry or request for quotation with his bid indicated thereon. Some governments, however, require bids to be submitted in duplicate; in such cases, the duplicate copy is usually given to the finance department. Such procedure is deemed unnecessary, since any required control by the finance department can be exercised at time of awarding the order. The United States government often requires two, and sometimes three, copies of a bid. This practice is sometimes necessary to satisfy its detailed procurement system; in other cases, it is necessary in order to secure the advice of a far-distant field service.

Quotations on Formal Purchases.—In submitting quotations on formal purchases, the bidder is usually required to comply with a more formal procedure. Figure 26, the form used in San Francisco, is typical. This form is used for purchases over $1,000 in amount which have been advertised in the official newspaper. A copy of the advertisement, giving complete specifications, is pasted on as a part of the proposal to insure uniformity of bid and fairness to all bidders. A copy of this blank is furnished to anyone who responds to the newspaper advertisement, and is also sent to the supply list on file in the purchasing office. The bidder is required to make an affidavit and to accompany his bid with surety of 5 per cent of its amount.

1. Affidavit.—For purchases in excess of $2,000, Los Angeles requires the bidder to give surety to the amount of 10 per cent of the bid, or to sign an affidavit that he is worth more than the sum of his bid. The bidder must in addition swear that the proposal is genuine and is "not a sham or collusive bid, and that it is

Bureau of Supplies
City and County of San Francisco
270 City Hall
Phone Park 8300
Local 19

S. S. & E.—41417

No.....

A Certified Check or certificate of deposit, payable to the order of the Purchaser of Supplies (see paragraph 2 on page 2), must accompany this bid to entitle it to consideration.

PIN IT HERE

ADVERTISEMENT

PROPOSAL FOR SUPPLIES

San Francisco, ...

Board of Supervisors, City and County of San Francisco.

In compliance with the above advertisement which was published in the official newspaper in the manner and form and for the time provided by law, the undersigned hereby proposes to furnish such articles at the prices herein stated and in strict accordance with the specifications and general conditions therefor hereto attached, all of which are made a part of this proposal.

A certified check is herewith enclosed, in the sum of $....., being 5 per cent of the amount bid.

IF A SOLE TRADER, SIGN HERE:

(1) Name under which business is conducted. .....

(2) Signature (Christian and surname) of proprietor.....

(3) Place of business.....
(Street and Number)

(4) Telephone No. .....

IF A PARTNERSHIP, SIGN HERE:

(1) Name under which business is conducted.....

(2) { Signature (Christian and Surname) of each member of partnership. } .....

(3) Place of business.....
(Street and Number)

(4) Telephone No. .....

IF A CORPORATION, SIGN HERE:

(1) Name under which business is conducted.....

(2) { Signature, with official title, of officer authorized to sign for the corporation (a copy of such authority, consisting of resolution of board of directors, section of by-laws, etc., must be attached hereto, and the corporate seal must be impressed thereon, or in lieu of such copy of authority an affidavit by the signatory to said effect will be acceptable). } ..... { Impress Corporate Seal Here }

(3) Incorporated under the laws of the State of.....

(4) Place of business.....
(Street and Number)

(5) Telephone No. .....

FIG. 26. FORM FOR SUBMITTING BID ON FORMAL PURCHASES, SAN FRANCISCO, CALIFORNIA ($8\frac{1}{2}'' \times 11''$)

not made in the interest or in behalf of any person not named therein and that he has not directly or indirectly induced or solicited any other bidder to put in a sham bid; and has not caused, induced or solicited any other person, firm or corporation to refrain

from bidding; and that he has not in any manner sought by collusion to secure for himself an advantage over any other bidder."

A special affidavit is required by the city of Philadelphia with quotations on patented articles. The bidder swears that he is the owner or controller of the patent on the given commodity, and that the price quoted to the city of Philadelphia "is the lowest price at which said articles are sold to anyone in the open market." Several other governments include in the conditions of purchase a paragraph in which the bidder assumes responsibility for any claims which may arise for infringement of patent, copyright or trade-mark through use by the government of the articles to be supplied.[8]

2. Surety with Bid.—As a guarantee of good faith in submitting bids, and of intent to enter into contract, governments now almost without exception demand some form of surety with a bid on a formal purchase. This surety is to be distinguished from the surety with contract, which is discussed in the following chapter. Surety is accepted in the form of cash, certified check, or bond. As a general rule no surety is required with bids on informal purchases. Five cities, however, demand surety with informal bids. Of these New York City requires surety to the extent of ½ of 1 per cent of the amount of the bid. The United States government has adopted a standard form of "annual bid bond" which may be submitted once each year by bidders in lieu of bond with each separate bid.[9] By this bond the bidder certifies that he will furnish the required surety with any contract which may be awarded to him within the twelve-month period covered by the bid bond. The state of Kentucky requires a deposit of

[8] This provision is almost standard, and is used in several different proposal forms with only slight variations. It appears as follows in the Los Angeles form: "The contractor agrees to save, keep, bear harmless, and fully indemnify the city and any of its officers or agents from all damages, costs, or expenses in law or equity that may at any time arise or be sent up for any infringement of the patent rights of any person or persons in consequence of the use by the city, or by any of its officers or agents, of articles supplied under this contract, and of which the contractor is not the patentee or assignee, or which the contractor is not lawfully entitled to sell."

[9] *Standard Form 34*, approved by the President, June 10, 1927.

$250 with all bids for staple supplies, irrespective of amount, while Minnesota requires a certified check for $500 with bids on large orders.

Almost invariably some surety is demanded with bid on formal purchases. The usual amount is 5 per cent of the bid, as is the practice in San Francisco (See Figure 26) and in the states of Montana and South Dakota. Los Angeles requires cash, certified check, or surety bond for 10 per cent of the bid, while New York City requires a 30 per cent surety. New York state requires each bidder to file an annual guaranty bond of $2,500. In lieu of surety with bid on a formal purchase, the state of Maryland requires a written statement in which the bidder agrees, if awarded the order, to reimburse the state for the price difference arising from open market purchase of any article which he fails to deliver in accordance with the terms of the order or contract. This is a simple and inexpensive method that deserves widespread adoption. As a substitute for surety, some governments accept a "surety's consent to bond," which is a written agreement by a surety company to bond the bidder to the required amount if his bid is accepted.

The check or bond is made payable to the contracting government, is retained by the purchasing or finance department until the order has been awarded, and then is returned to the unsuccessful bidders, while the deposit submitted by the successful bidder may, as in New York City, be kept as the surety for fulfillment of the order or contract.

Although seemingly necessary as a protection against the unscrupulous bidder, the matter of surety has been carried beyond its logical bounds. It is illogical, and often uneconomical, to set an arbitrary limit of expenditure beyond which surety with bid and contract is required. Many reputable firms are discouraged from doing business with governments on account of the "red tape" requirement of submitting cash, check, or bond with their bid. Their potential profit is lessened by the loss of interest on the surety during the bidding period; besides, they are put to the

expense and inconvenience of preparing and submitting such deposit in proper form.

Private buyers, almost without exception, regulate the surety by the merits of each particular case rather than by the amount of the expenditure involved. Private corporations seldom require surety, either with bid or contract, except on very large expenditures.

If the government is safe in accepting a bid for $499 without surety, is it always necessary to vary the procedure if the sum of $501 is involved? If a reputable dealer can be depended upon to deliver one carload of coal without giving surety, why can he not be depended upon to deliver two, or even three carloads without default? Admittedly, large construction contracts present a different problem. The hazards involved in a $10,000,000 highway improvement program are vastly greater than in the purchase of an automobile truck. Private buyers require indemnity on large construction contracts, and public buyers cannot afford to do otherwise. But every experienced buyer has been a party to hundreds of orders and contracts in which the surety was given only to satisfy a "red tape" requirement of the law.

The handling of the surety problem should be left to the discretion of the purchasing official, as now provided by law in ten states and in fifteen cities. Milwaukee gives its purchasing agent discretionary authority not only to waive or to require surety, but also to regulate the amount thereof. This sensible law should be widely copied. It adjusts the surety to the merits of each particular case, and sidesteps the arbitrary and illogical regulation of surety by the amount of expenditure.

If the purchasing agent cannot be trusted to safeguard the interests of the government, he should be removed from his important post. If he does not have sufficient judgment to decide when and in what amount surety is required, he is a misfit in his position. If the purchasing agent may not be vested with sole responsibility in this matter, let him secure the concurrence of the city comptroller, as in St. Louis; or of the mayor and comptroller, as in St. Paul.

3. Instructions to Bidders.—A formal quotation generally contains more detailed instructions and general conditions of purchase than an informal quotation. The reverse side of the San Francisco quotation (Figure 26) gives a complete set of instructions.[10] The bidder is told in detail how to submit his bid and samples, how deliveries must be made, how inspection will be conducted, and how the order will be awarded. Still more detailed are the instructions to bidders on orders of the federal government.[11] Such instructions leave no room for misunderstanding, if they are read. They serve chiefly as a defense to the government in later disputes over fulfillment of the contract.

4. Samples with Bids.—Bidders are often asked to submit a sample with their bids on either formal or informal purchases, for an examination and comparison of samples is often the determining factor in establishing the "lowest and best bid." Even though exact specifications have been established to which all bidders can conform, a comparison of samples may prove the desirability of one brand over another. When contracts for institutional requirements are to be awarded in the states of Maryland and Massachusetts, for example, the stewards or superintendents assemble and examine all samples, which are identified by a number only and with no indication of the supplier's name, as a safeguard against personal bias or prejudice. The sample selected by a majority of the using branches becomes the basis of the purchase, price and quality being equal, and is generally retained as the "standard sample" for use in inspection of the deliveries. If the government has facilities for making chemical or physical tests, all samples are tested in the laboratory to determine compliance with the specifications or to establish which sample involves the highest quality and has the greatest potentialities for satisfactory performance.

The preparation and submission of samples is often costly to

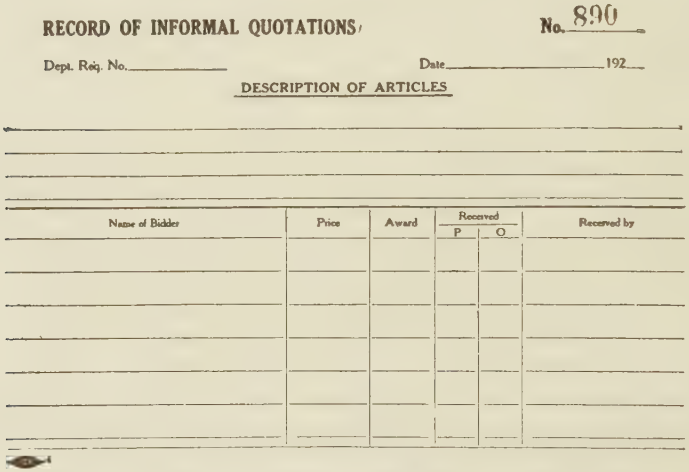
[10] The instructions to bidders in San Francisco are reprinted in Appendix F.

[11] *Standard Form 22,* approved by the President, November 19, 1926.

the vendor. Samples should not be required wherever an exact specification is available and can be used as a substitute.

Receiving and Recording Quotations.—The procedure of receiving and recording informal quotations is different from that followed with formal quotations, as pointed out below.

1. The Informal Quotation.—Quotations on informal or open market purchases are received by telephone, by mail, or by personal interview, and are generally recorded when received. Inquiries are sent to at least five dealers on all purchases under $150



RECORD OF INFORMAL QUOTATIONS No. 890

Dept. Req. No. _____ Date _____ 192__

DESCRIPTION OF ARTICLES

Name of Bidder	Price	Award	Received P	Received O	Received by

FIG. 27. RECORD OF INFORMAL QUOTATIONS, SAN FRANCISCO, CALIFORNIA (6″×4″)

in Hudson County, New Jersey. The dealer is requested to "please quote by phone" on receipt of the inquiry and to submit a confirming quotation by mail. The purchase negotiation is thereby speeded up, for the order can be awarded if necessary on the basis of the telephone quotations, and before the confirming quotations are received.

San Francisco's form for recording informal quotations (Figure 27) is highly practicable. It gives all necessary information, including the signature of the employee who received the quotation, a notation whether it was received by phone ("P") or

orally ("O"), and a column for checking the bidder to whom the order was awarded.

Reference has already been made to the practice in Santa Cruz County, California,[12] of listing competitive quotations on the bottom of the requisition form, which thus becomes a record of the purchase. Los Angeles County follows the same method for purchases of small amount.

2. The Formal Quotation—the Sealed Bid.—The sealed bid, more than any other earmark, distinguishes public from private purchasing. The sealed bid is very seldom employed by private corporations. It is generally used in government with formal purchases, whether purchasing is centralized or not. Some governments have made it almost a fetish. The feeling that the use of sealed bids is the sole requisite for a good purchase is partly responsible for the belief, still current, that anyone can buy as well as another, and for the appointment of unqualified purchasing agents in many governments.

The sealed bid was intended to be, and should be kept as, the means for preventing favoritism in the award of public orders. Theoretically, favoritism is made impossible if everyone has an equal chance to compete, if all bids are kept secret until a certain hour and are opened publicly in the presence of the competitors or their representatives, and if the contract is awarded to the lowest and best bidder. The use of sealed bids is also a protection to the buyer, for no charge of favoritism or collusion can thus be brought against him.

The sealed bid, however, does not of itself prevent dishonesty. The dishonest buyer may still distribute orders among the "faithful" of his own political party or among his own friends by confining the publicity to, and securing bids from, them only. Then, too, it may become the course of least resistance to the lazy buyer. His task is simplified if he need only advertise in the newspaper, receive and open sealed bids at a certain hour, and award the order to the lowest bidder, regardless of the current market prices. His only tools are the newspaper and the clock. He need not search

[12] See Figure 15, p. 142.

for new sources of supply, or keep in touch with price trends. The sealed bid is an asset to good buying if used in conjunction with adequate supply lists, direct inquiries, and other up-to-date publicity methods; but it may become the cloak for slipshod buying if leaned upon too heavily.

Sealed bids are required in most governments for all formal purchases. They usually go hand in hand with newspaper advertisement and are required for the same maximum amount of purchase—usually $500 or $1,000. But some governments use the sealed bid without newspaper advertisements for informal purchases. In six cities they are received for all except emergency purchases. In Washington, D.C., and Louisville, all orders over $25 are the subject of sealed bids; in Nashville, all orders over $50. Milwaukee and New Orleans award all except emergency purchases on the basis of sealed bids, though not required by law to do so for orders under $1,000. On the other hand, Los Angeles uses sealed bids only for orders in excess of $2,000. In Pasadena, California, orders of $2,500 may be placed without sealed bids but with consent of the city manager, and up to $5,000 with the consent of the city commission.

Governments are moving toward greater flexibility in the use of sealed bids, although, generally speaking, they still can be dispensed with only in emergency. In nine cities they are waived by vote of the council or commission; in forty-two others, with the consent of the city manager; in Boston, with the consent of the mayor. Six city purchasing agents can waive sealed bids at their own discretion, but must submit to the council or commission a statement of the reasons therefor. The purchasing agents of eight states are given similar authority, with the consent of the supervisory official or board.

As a substitute for the sealed bid, some governments require that all purchases wherever possible "shall be competitive." The Detroit charter, for example, specifies that at least three competitive bids shall be secured, except in the case of patented articles to avoid the delay of receiving sealed bids. Like the sealed bid, however, the requirement for competition, if followed slav-

ishly, may lead to ridiculous procedure. A statement by the purchasing agent of Denver shows how religiously it was there complied with: "Thus far we have had but one emergency purchase involving a large amount, procuring parts from the East to repair a fire truck which had been wrecked. In this instance the parts could be secured only from one concern manufacturing the truck. We ordered the parts by wire, but will ask for bids nevertheless to keep our own records clear by complying with this provision." [13]

The requirement for competition, like the use of sealed bids, is necessary in public purchasing; but it should always be subject to exception and applied with common sense.

(*a*) *Opening of sealed bids.*—The opening and recording of sealed bids takes place in a ceremonious setting, which is substantially the same everywhere. The various sealed bids are generally deposited, as received, in a locked box, marked with the date of opening or with the number of the contract. At the appointed hour, the box is opened and the bids are unsealed in public under the auspices of the purchasing authority. The competitive bidders and the using agencies concerned are invited to attend or to be represented. The Maryland using agencies are notified by postal card of the hour for opening of bids, and are invited to be present. The finance department is also represented in many cases.

After being unsealed and inspected by the proper authorities, the bids are read by some official, usually the purchasing agent or his representative, and are recorded on a summary sheet. The form used in Milwaukee (Figure 28) for summarizing bids is believed to be representative, although various sizes and designs are in use elsewhere.

(*b*) *Rejecting certain bids.*—The purchasing agent and his staff are usually prohibited by law from having any interest in public orders or contracts. All bids from firms in which the purchasing officials may be even remotely interested are therefore usually rejected. The most stringent provision of this nature is

[13] *Western Purchasing Agent,* March, 1924, p. 6.

contained in the Kentucky statute establishing the state purchasing commission.[14] This prohibits any contract with "any partnership, firm or corporation, in which any members of said commission shall have any interest, directly or indirectly, or shall be a stockholder, nor with any relative of any member of said commission, either by *blood or marriage within the third degree.*" Violation

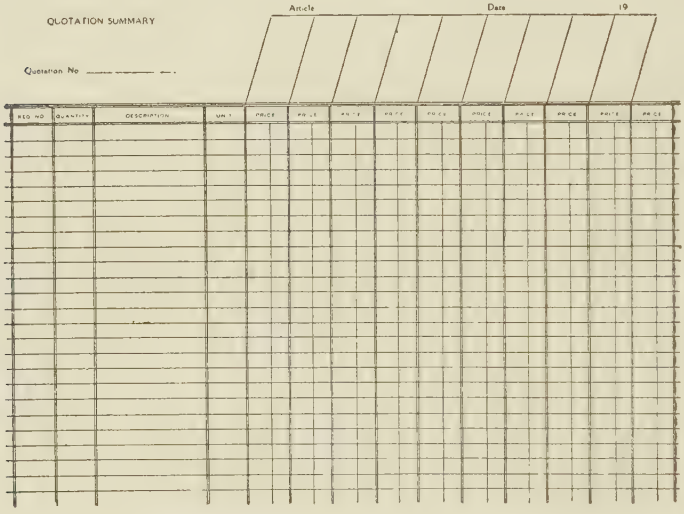


FIG. 28. SUMMARY SHEET FOR RECORDING BIDS, MILWAUKEE, WISCONSIN (11"×8½")

involves "a fine not to exceed five thousand dollars ($5,000) and imprisonment in the penitentiary not less than five or more than ten years." Under such a law the best qualified purchasing agents should be ne'er-do-wells with no commercial connections anywhere by blood or marriage. Otherwise, the supply sources of the state will be greatly restricted. The government purchasing agent should be prevented from directing business to his relatives or firms in which he has an interest, unless, as sometimes happens, such firms may be the most satisfactory supply sources. However, a general prohibition to this effect, although sound in principle, may in practice be uneconomical if too strictly enforced.

[14] H. B. 227, laws of 1926, section 7.

Some laws provide that an order or contract, awarded in violation of this restriction to a party in which the buyer is financially interested, may be voided. In New York City, the comptroller has this control over the legality of contracts, which seems a wise provision.

Bids from all who have defaulted on past contracts, or are in arrears to the government, are usually rejected. The second class cities of New York state discard the bid of anyone "who has refused or neglected to execute any contract awarded to him." The San Francisco purchasing ordinance provides that "any contractor who fails to live up to the terms of his contract for the delivery of materials, supplies or equipment may, upon the joint action of the head of the department and the purchaser of supplies, be declared an irresponsible contractor and shall not, for a period of one year thereafter, be awarded any further contract for furnishing such materials, supplies or equipment to any department of the city, unless the board of supervisors shall by a two-thirds vote remove such disqualification." In the United States government, the names of all contractors debarred by one department for nonfulfillment of a contract are furnished to all other departments by the Federal Purchasing Board for their guidance in considering bids on future contracts. The purchasing agent of St. Paul may throw out any undesirable bid, with consent of the mayor. The California law prohibits the state and any political subdivision from purchasing any product of Mongolian labor, and bids representing such products are therefore rejected.[15]

(*c*) *Rejecting all bids.*—Governments usually reserve the right also to reject *all* bids. In such case, the entire process of readvertisement and opening of bids must generally be repeated, which means delay and added cost. Consequently, governments have often been compelled to purchase commodities of undesirable quality or at a higher-than-market price rather than run the risk of receiving, in a readvertisement, quotations perhaps less desirable, besides incurring the extra delay and expense. A few purchasing agents are fortunately vested with authority to reject all

[15] Section 3235 of the Political Code.

bids and to buy in the open market if a saving can be demonstrated. When no bid is received in response to advertisement and requests for quotations, or when all bids are the same, the purchasing agent of San Francisco may buy in the open market, provided the price paid shall not exceed the lowest bid. This is a wise provision which should be widely copied. If bids are rejected in Oakland, California, the open market price must be *lower* than the lowest bid. Certain states, notably Oregon, Pennsylvania, Texas, and Vermont, permit open market purchases after rejection of bids.

In purchasing commodities with standardized prices, every experienced purchasing agent has sometimes received uniform bids from several vendors. This situation is often brought about by collusion among the bidders in an attempt to maintain high prices; in other cases, it is the natural result of established price agreements. In a few such instances, the award has been made by casting lots among the bidders. Some governments follow the practice of rotating orders among several local vendors of a commodity with standardized prices so that all may get a share of the public business. The purchasing agent of Milwaukee recently suspected collusion among the bidders on a large yearly contract for a certain article. He therefore rejected all bids, readvertised for bids, and repeated this process until one member of the group broke his agreement with the other competitors, submitted a bid considerably lower than his former quotation, and received the city's contract. Although the purchasing agent had meanwhile been buying the city's requirements in small lots at higher unit prices, he saved an appreciable amount in the long run on a long-term contract.

(*d*) *Certain bids given preference.*—In some governments, the following classes of bids are given preference:

(*1*) *Bids of local dealers.*—Local or state dealers are often given preference or a price differential over "out-of-town" or "out-of-state" competitors. The purchasing ordinance of Galveston, Texas, is representative in providing that "all other things being equal, those bidders having an established local business in

the city of Galveston are to be given preference." The form used for submitting formal quotations in Los Angeles notifies the bidder that local suppliers will be given such preference over out-of-town dealers, and California suppliers, over those from other states. The state purchasing agencies of Minnesota, South Dakota, Utah, Washington, and West Virginia are required by law to give preference to dealers doing business in the state, all other factors being equal.

Any state institution of Virginia may secure competitive bids from local dealers on any purchase in excess of $100, and submit all such bids to the state purchasing agent for comparison with his bids on the same purchase; "and should the same be of equal value, grade, quality and price, then the state purchasing agent shall accept such local bids." [16] This in substance creates as many local zones as there are state institutions, and gives local dealers in each zone the preference on institutional business.

Public purchasing agents are constantly urged to "patronize home trade." Local and state dealers claim that, since they pay a part of the taxes, they deserve a share of the government's business. Another specious argument is that government expenditures help to promote general business prosperity; and since public funds are contributed by all on a pro rata basis, they should be directed in the channel which will work the greatest good to the greatest number of local taxpayers. Centralized purchasing is often opposed by chambers of commerce and other organized business groups on the ground that it will reduce the amount of government business awarded to local suppliers.

It is believed, however, that a government should award its orders on the same principle as a private corporation and should aim to secure the best quality and service per dollar of expenditure. A price differential in favor of local dealers, while returning to them a part of their taxes, may penalize the general taxpaying public. A government purchasing agent should secure as widespread competition as possible, and the local or state dealer should

[16] Chapter 172, acts of 1926.

enjoy a preference, all other factors being equal, but not a price differential in his favor.

(2) *Products of state institutions.*—The public purchasing agent is free from the problem of "reciprocity" which is often a serious factor in buying for a private corporation. Every producer must sell his product. It is, therefore, becoming increasingly the practice for sales departments to enter into agreements whereby each company buys all its requirements in a certain commodity or list of commodities from the producer who reciprocates. This is naturally a good business practice wherever the products of the reciprocating concern are the best on the market and can be purchased for the proper price. But it sometimes places serious limitations on the freedom of action of a private purchasing agent in securing the right goods at the right price.

On the other hand, the public purchasing agent is often compelled by law to buy the products of state penal and correctional institutions and to limit his source of supply thereto irrespective of price or quality. The state purchasing agencies of Arkansas, Kansas, New York, and Montana are responsible for selling the products of state institutional farms and factories, in addition to procuring their *matériel* requirements. All political subdivisions of these states, and of Indiana, Pennsylvania, and Ohio as well, are required to buy the products of state institutions at the prices established by the state agency which is in charge of their sale and distribution.

On January 1, 1926, Indiana established the office of state sales agent, who is in charge of the sale of institutional products to all local governments of the state. A catalogue is issued periodically, describing state products and setting the sale price. All those articles needed by local governments which are for sale by the state must be bought from the state. New York state prisons manufacture wearing apparel, waste baskets, brushes, brooms, benches, furniture, and other articles. No local government can buy any of these commodities in the open market unless the state supply is exhausted at time of purchase or unless a release has been secured from the state superintendent of prison industries.[17]

[17] Sections 182-184, New York prison law.

States sometimes buy each other's institutional products. For example, the state of New Jersey maintains a factory in which all automobile license plates issued in that state are produced by prison labor, and are also furnished to several neighboring states as well. Likewise the state of Washington specializes in jute products and sells some of the output of its factory to other states on the Pacific coast.

The purchase of prison-made products has several advantages. It helps to keep the state institutions on a self-sustaining basis, and thereby enables local governments to reduce the cost of state government by buying state products. On the other hand, prison-made goods are often inferior in quality to the products of private manufacturers. Sometimes, too, despite the use of convict labor, the sale price of state products of inferior quality is as high as the prevailing market price of the same commercial products. In such cases, compelling local governments to buy state products may be robbing Peter to pay Paul.

The United States government, contrariwise, has long specifically debarred the prison labor products of state governments from use in the federal service. However, cotton duck, shoes, brushes, etc., produced in the federal penitentiaries are issued for use by the various federal departments and agencies.

(*e*) *Selecting the "lowest and best bid."*—Governments formerly made the mistake of requiring orders and contracts to be let to the "lowest bidder." This made purchasing a routine matter which could be entrusted to any clerk. No knowledge of market prices, quality of materials, or reputation of the vendor was required, for the award was made on the basis of price alone. At the present time, most state or local laws require the award to the "lowest and best bidder" or to the "lowest responsible bidder," which allows the purchasing authority to exercise judgment. The business reputation and standing of the vendor and the quality of the sample submitted, may be tantamount to price in determining the "best" bid.

In some cases the selection of the lowest and best bid rests with the purchasing agent alone. When the purchasing authority is a board, the clerk or secretary usually presents a summary of the

bids to the board for its decision. Such is the practice in the second class cities of New York State. The purchasing agent in Pittsburgh submits to the city council all bids received, with a recommendation on the proper award which is made by resolution of that body.

All public purchasing agents are vested with responsibility in this matter through a strict interpretation of the requirement for awarding contracts to the "lowest *responsible* bidder." The most irresponsible bidders are often the lowest bidders. Through investigation of the bidder's financial status and his performance record, the low bid may be established as the worst bid, since the possession of a bond is no guarantee of ability to perform a contract. The public official should determine the lowest responsible bidder only after fully weighing all the factors involved.

Abundant juristic support may be found for the use of such discretion by public officials. To cite only one case, the supreme court of Pennsylvania has held "the term 'lowest responsible bidder' does not mean the lowest bidder in dollars; nor does it mean the board may capriciously select a higher bidder regardless of responsibility or cost. What the law requires is the exercise of a sound discretion. . . . They should call to their assistance the means of information at hand to form an intelligent judgment. They should investigate the bidders to learn their financial standing, reputation, experiences, resources, facilities, judgment and efficiency as builders." [18]

The Associated General Contractors of America, after exhaustive study, have recommended that public officials should require contractors to demonstrate their responsibility before their bids are entered in competition. Qualifying in advance spares the contractor the considerable expense of preparing estimates and bids which may ultimately be thrown out, and it insures that all bids submitted are "responsible." This association has also prepared a *Standard Questionnaire and Financial Statement for Bidders* and a tabulation of court decisions interpreting the word

[18] *Hibbs v. Arnsbern,* 119 Atlantic 727.

"responsible" and defining the discretionary authority of public officials.[19]

(*f*) *Bids open to public inspection.*—Invariably the competitive bids are open to public inspection after the order or contract has been awarded. The bids are usually filed with the summary sheet to answer any questions which may later arise concerning the justice or validity of the award. Reference has already been made to the form used in Los Angeles County (See Figure 21) whereby all bids are enclosed in the folder which is typed at

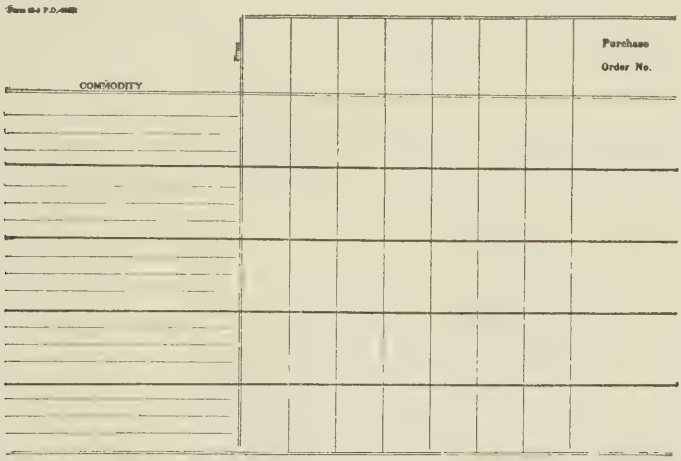


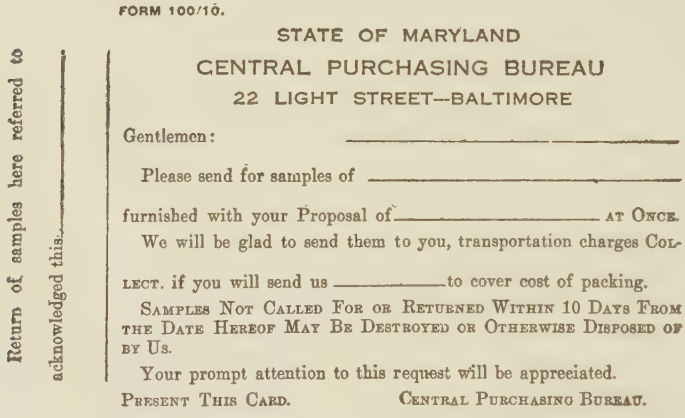
FIG. 29. ENVELOPE USED AS RECORD OF PURCHASE NEGOTIATION, DALLAS, TEXAS (8¾″×6″)

the same time as the inquiries. All bids in Dallas, together with a copy of the order, are filed numerically by order number in a 6 x 9-inch envelope, whose cover serves also as a summary of the bids (Figure 29). This envelope consolidates the whole story of each order and makes it available for inspection at any future time.

Should bids be made public? Many private corporations have found that manufacturers and wholesalers are often willing, in

[19] The Surety Association of America has also compiled a list of court decisions interpreting the term "lowest responsible bidder," which may be secured from the headquarters in New York City.

times of business depression, to cut their regular prices, if their quotations are withheld from competitors. "Confidential" quotations and price cutting occur less frequently if all competitive bids are announced. And yet publicity to bids still seems necessary to keep public purchasing open and aboveboard and to prevent connivance between the purchasing agent and the supplier. In Detroit, all the bids, the name of the successful bidder, and the contract price are published in the official proceedings of the council or commission and thus become public information. In Columbus and San Francisco, only the name and quotation of the lucky bidder are published. So far as known, all governments, with the exception of Glendale, California, keep all bids on file for public



FORM 100/16.

STATE OF MARYLAND

CENTRAL PURCHASING BUREAU

22 LIGHT STREET—BALTIMORE

Gentlemen: _____

Please send for samples of _____

furnished with your Proposal of _____ AT ONCE.

We will be glad to send them to you, transportation charges COLLECT. if you will send us _____ to cover cost of packing.

SAMPLES NOT CALLED FOR OR RETUENED WITHIN 10 DAYS FROM THE DATE HEREOF MAY BE DESTROYED OR OTHERWISE DISPOSED OF BY US.

Your prompt attention to this request will be appreciated.

PRESENT THIS CARD. CENTRAL PURCHASING BUREAU.

Return of samples here referred to acknowledged this.

FIG. 30. NOTICE TO BIDDERS TO CALL OR SEND FOR SAMPLES, STATE OF MARYLAND (5½"×3¾")

inspection. Bids on all orders for maintenance supplies, which constitute the bulk of Glendale's requirements, are not announced, by order of the city manager.

(*g*) *Notice to bidders and return of samples.*—In informal purchases, where the amount involved is small, the unsuccessful bidders are seldom notified. But it is customary as a matter of courtesy to notify all unsuccessful bidders on formal purchases. If the bids have been accompanied by some form of surety, the return of the surety with a letter is sufficient notification. Some

governments send out a form letter or postal card thanking the vendor for his bid and soliciting his competition on future orders. This is a practicable and an inexpensive method for creating good will among suppliers. Even though the notice be a printed form, the bidder is assured thereby that his quotation has received consideration.

The return of samples is another aftermath of the purchase negotiation. Some governments, Washington, D. C., and New York City for example, maintain special rooms where samples submitted with bids are kept for a certain period after the award of the contract. If not called for by the bidder, the samples are sold or destroyed. The state of Maryland uses a special card (Figure 30) for asking bidders to call for samples or to send the amount stipulated to cover cost of packing and transportation. If no reply is received within ten days, the samples are destroyed or sold.

CHAPTER VIII

CONTRACTS AND ORDERS

The vendor is authorized to furnish certain supplies, materials, equipment, or service for which the government agrees to pay, through the issuance of an *order* or a *contract*. An order bears the signature only of the buyer or his agent, while a contract is usually signed by both the buyer and the seller. A contract usually involves a larger amount, or calls for delivery over a longer period of time, than does an order. A contract is usually more formal than an order, often requiring the signatures of witnesses as well as an affidavit by one of the contracting parties. A contract is generally preferred to an order when the government must protect itself against loss from default by the supplier, as in construction projects; in the purchase of a commodity whose price is subject to fluctuation or one requiring special manufacture; or in time of possible supply shortage.

The Formal Contract

A contract involving a large amount frequently passes through many hands before it is issued. The mayor, city manager, council, or governor, in addition to the purchasing agent, may pass upon its advisability from the business standpoint; the finance officer may determine whether appropriations are available for the expenditure; the city solicitor or attorney general may pass upon its legality; and a similar or greater number of examinations and approvals may be required in the seller's organization.

Contents of the Contract.—Supply, service, and construction contracts generally consist of the following main parts:

1. Definitive Articles.—The "articles of agreement" are usually the first part of the contract. They give the date, identify

the contracting parties as "party of the first part," and "party of the second part," respectively, refer to the appropriation from which the contract is payable, and introduce the general conditions which are mutually accepted. A copy of the newspaper advertisement inviting proposals and a copy of the proposal submitted by the bidder are attached to, and made parts of, the articles of agreement in Pittsburgh.

2. Surety.—The supplier is seldom asked to submit a surety when an order is issued. But almost invariably surety in the form of cash, check, surety bond, or government bonds is required of the supplier who is a party to a formal contract, as an evidence of his responsibility for carrying out his obligations. Default on a contract may involve loss for all parties concerned. If it be a contract for a construction project, the public may be deprived of the use of the improvement for a longer time than necessary, and the ultimate cost may be materially increased if a substitute contractor must be found to complete the work. The contractor may go bankrupt, lose the amount retained by the government from the progress payments, and suffer a loss in reputation. The surety company may lose the amount of the bond or, instead, may have to complete the project through employment of a substitute contractor. A public corporation would be foolhardy to throw itself on the mercy of the vendor or contractor without some form of surety.

On contract orders, New York City retains the sureties of the three lowest bidders. If the successful bidder does not enter into contract within five days after notification of award, his surety is forfeited, and the contract is awarded to the next lowest bidder or the contract is reawarded after readvertising. In New York City the surety submitted with the bid is retained as the surety with the contract, since the requirement is the same—30 per cent. In most governments the surety with the bid is returned and a new and larger surety is given when the contract is signed. The amount of surety with contract varies from 10 to 50 per cent of the contract price. South Dakota requires surety to 40 per cent of the contract price. On construction projects, the state of Wis-

consin demands surety to the full amount of the contract. On public works projects requiring some time for completion, many governments also protect themselves against default by retaining a percentage of the progress payments. This generally supplements the surety given when the contract is signed. Portsmouth, Virginia, retains 15 per cent, and the state of Wisconsin retains 20 per cent of each monthly estimate.

In the final analysis, the government itself pays for the surety. The average cost of a surety bond, now 1½ per cent of its face value, is generally included by the contractor in his bid. New York City maintains a security deposit division in the finance department for handling deposits and bonds submitted with bids and contracts. Cash and certified checks are immediately deposited in the bank to draw interest until refunded, while the interest on such deposits is sufficient to pay the operating cost of the security deposits division. In reality the city of New York bears the burden, for the interest on the deposit is a part of the bid or contract price. In his annual report for 1924, C. D. Buck, then chief engineer of the Delaware state highway department, showed that surety companies had received over $90,000 on contracts awarded by his department during the preceding two years. Without doubt, this cost was shifted to the state of Delaware in the contract prices.

Then, too, experience has shown that surety bonds do not always safeguard the public interest. In 1923 a well-known surety company reported that losses through default had consumed 92½ per cent of all premiums received that year from road contract bonds. Such losses are reflected in the premium rates which are eventually paid by the public and which have increased over 1,000 per cent in the last twenty years. Despite the most searching inquiry by surety companies, irresponsible contractors receive surety bonds just the same.

Nor is the "surety's consent to bond" the solution for reducing the cost of indemnity. This document eliminates, it is true, the expense of submitting a bond with the bid. But it presents serious hazards for both the government and the guarantor. The bonding

company binds itself in the dark, often without seeing the bid of its clients or the competitive bids. The bid may be too low, in which case the possibility of default is greatly increased.

In March, 1926, Sullivan W. Jones, then state architect of New York, submitted a report to Governor Smith advocating the elimination of the surety bond on future state contracts. Instead, he proposed that the state should demand a cash deposit when the contract is signed; that 20 per cent be retained on the first payment to the contractor; that the percentage retained be progressively diminished on each successive payment until, on the payment preceding final settlement, the state would retain only 5 per cent; and that the total reserve and the original deposit be paid to the contractor at the time of settling the account. *The American City* recommended editorially in April, 1926, that 20 per cent of each progress payment should be retained until the reserve equaled 10 per cent of the contract price; and that thereafter each estimate be paid in full. Both of these plans seek to ease the burden imposed on the contractor by this form of surety. But the retention of a part of the payment is likely to be more costly to the contractor than is a surety bond. By this method he is deprived of a part of his working capital and may have to borrow at a high rate of interest to carry on. It is also likely to be more costly to the government, for the expense to the contractor may be included in advance in his bid.

Surety is a seemingly necessary form of insurance for contract performance, the expense of which increases the cost of *matériel* or services. Although surety with contracts is very often necessary, governments should vary its use according to the circumstances of each individual case, rather than on the arbitrary basis of the amount involved, as advocated in connection with the question of sureties with bids.[1] The total cost of surety could often be reduced by restricting its use to cases of established necessity. The United States government has recently adopted a standard form of "annual performance bond" which will reduce

[1] See Chapter VII, p. 170.

the cost of surety on federal contracts.[2] By this form, the contractor submits one bond as sufficient surety to indemnify the government for nonfulfillment of any and all contracts awarded to him during the year covered by the bond. This reduces the expense to the contractor of submitting a bond for each separate contract. It is a companion form to the annual bid bond mentioned in the preceding chapter.[3]

3. Specifications.—The articles or service to be supplied should be definitely and clearly stated in the contract. If it be a construction project, the specifications will doubtless have been prepared by some competent engineer. In case standard specifications are in effect, these can be referred to by number or reprinted in full. The commodities or services being purchased should be more carefully and clearly described in the contract than in the invitations for proposals, since the contract legally obligates the government for the amount involved. In some cases, the price and specifications are set forth in the resolution of the council or commission by which the contract was authorized. The contract document then consist only of the agreement and the surety.

4. Conditions of Purchase.—The conditions should be sufficiently detailed to avoid misunderstandings which may lead to disputes and litigation. They may cover a multitude of contingencies, depending upon the character of the commodities or services purchased. The contract form used in Detroit is a simple agreement, binding the seller to furnish commodities or services and the buyer to pay a certain amount. No condition is stated, save that the contract is contingent upon confirmation by the city council.

The contracts used until recently by the federal government were needlessly detailed and complex, and varied as to form between departments. But in 1927, through the efforts of the Interdepartmental Board of Contracts and Adjustments, a standard form of contract was adopted which is fairer to the contractor

[2] *Standard Form No. 35,* approved by the President, June 10, 1927.

[3] See p. 168.

and is less complex than its predecessors.[4] Its use is now mandatory upon all departments and establishments of the United States government, and no change can be made in the form without the express permission of the director of the Bureau of the Budget.

A similar step has been taken recently toward the standardization of municipal contract forms by the Society for Municipal Improvements. A special committee of the society has worked for several years on the subject and has recommended a tentative standard form.[5] Its use by municipalities will help greatly to standardize and simplify the form and conditions of contracts.

5. Signatures of the Contracting Parties.—The contract is signed by the supplier or his representative and by the government purchasing executive. The head of the using department signs jointly with the purchasing agent in San Francisco. The mayors of Pittsburgh and Boston also approve and sign all city contracts, while the mayor of San Francisco approves and signs the bond, but not the contract form. The corporation counsels of Boston and Detroit certify to the legal correctness of the contract. As already stated, in Detroit the city council confirms the contract by resolution after its execution, while in San Francisco the contract must be authorized by resolution of the board of supervisors before it is drawn up and signed. In some governments, Pittsburgh and New York state for example, the comptroller signs all contracts to certify that sufficient funds are available in unencumbered appropriations. Witnesses to the signatures are required in Detroit, in New London, Connecticut, and a few other governments, but such requirement is becoming less general.

6. Penalties for Nonfulfillment of Contract.—The government sometimes reserves the right, if the contractor defaults, to cancel the contract and to purchase substitute commodities in the open market, charging the contractor with any difference in price. The contracts used by Boston and the state of Maryland are examples of this form. The state of Massachusetts also penalizes

[4] *Standard Form Nos. 32 and 33,* approved by the President, June 10, 1927.

[5] "The Standard Municipal Contract Form" is printed in the 1926-1927 *Proceedings* of the American Society for Municipal Improvement, pp. 349-362.

the contractor in this way if he attempts to deliver commodities of inferior quality. The amount of the loss from open market purchases is deducted from the amount due the contractor for previous deliveries on the contract or is recovered from his surety bond.

"Liquidated damages" are also frequently collected from contractors for nonfulfillment of contracts. By this plan the contractor is penalized to a certain amount, specified in the contract, for every calendar day of delay in making delivery. If the contract is terminated for nonfulfillment, liquidated damages are collected for every calendar day which accrues between the date of termination and the date of securing satisfactory materials or supplies elsewhere. But such damages cannot, of course, be collected for delays arising from contingencies beyond the contractor's control. The above-mentioned standard contract of the federal government has an alternative provision for liquidated damages which is to be included or excluded at the discretion of the contracting officer.

Publicity to Contracts.—After their execution, public contracts are usually open to inspection in the purchasing office. In San Francisco, copies of all contracts are filed for public inspection with the city purchasing agent, city auditor, and, in the case of public works contracts, with the board of public works. They are also promulgated in the official daily newspaper which carried the advertisements soliciting quotations. Cleveland publishes all contracts in the official newspaper, giving the contract number, the name of the contractor, the using department, and the amount involved. As in San Francisco, the purchasing office keeps a copy on file; but the official copy is retained by the division of accounts of the finance department for checking with invoices. The General Supply Committee of the United States government publishes the contract price and the name of the supplier in the *General Schedule of Supplies*.[6]

Kinds of Contracts.—The following are representative of the different kinds of contracts now in use by governments:

[6] See Chapter II, p. 25.

1. Definite Quantity and Amount.—This is commonly referred to as the "lump-sum contract" and is the form most generally employed. By this form both contracting parties know definitely what obligations they are incurring. The supplier knows the quantity to be delivered and can plan purchases and maintain stocks accordingly. The government knows definitely what sum is involved and can more easily keep expenditures within the appropriations.

But the definite contract also has certain disadvantages. If the contract covers a period of several months or a year, the factor of speculation is present. If the market price rises, the dealer may suffer a considerable loss on deliveries during the peak period. If the market price falls below the contract price, the government will be the loser. Furthermore, the government may have underestimated its quantity requirements at the time of executing the contract; hence, if the market price rises during the life of the contract, the government will lose on open market purchase of the extra quantity. If its requirements have been overestimated, the government will have to receive and pay for the excess quantity, which may later be sold as surplus at a loss.

2. Indefinite.—A contract may be indefinite as to the precise quality, the quantity, the price, the length of the contract, and the place and frequency of deliveries. Contracts for various services, such as telephone, heat, light, and power, are generally indefinite as to quantity, but definite as to the unit of price.

The *quality* of article to be supplied very rarely is left indefinite. But commodities made specially to order may be contracted for on the basis of the performance required, the supplier agreeing to furnish a satisfactory quality. In fact, some contracts specify both the quality and the minimum performance expected. The United States Navy Department buys hacksaw blades on the basis of the amount of metal to be cut by each lot of blades, and also buys tool steel on the basis of cutting efficiency. In purchasing automobile tires, Detroit contracts with a supplier to install all tires needed by the municipal motor equipment during the contract period, and to maintain all tires at the proper inflation and in good

repair. In all these contracts, the supplier is paid in proportion to the performance of his deliveries. The contract specifies the minimum performance required for the purchase price; if the performance falls short of requirements, the supplier is penalized by a deduction from his next invoice; if it exceeds the specified minimum, he is allowed a "bonus." Detroit thus buys tire mileage and not merely tires.

Any government with widely separated using agencies may not be able to predict at time of contract execution the precise quantity to be required by each branch or the time when *deliveries* will be needed. In such cases, a definite total quantity may be contracted for, to be delivered "as and where needed." When the using agencies are close together, this factor makes little difference on delivery costs; but in states like California or Texas, or the field services of the federal government, the supplier needs definite knowledge of delivery requirements before the contract is awarded.

Contracts are very seldom indefinite as to *time*. Few suppliers are willing to contract for more than one year on account of price fluctuation. The wise purchasing agent will regulate the length of the contract by the general market conditions. On a rising market, he will do well to contract as far in advance as possible and to increase his stocks; and on a falling market, to avoid long-term contracts and buy "from hand to mouth." But most purchasing agents are prevented by law from contracting beyond the end of the current fiscal year. In New York City, coal alone may be purchased on contract for longer than one year. Since the annual budget appropriates for the current year only, no funds are available beyond that period, and the fiscal authorities are unable therefore to authorize an expenditure, or to encumber appropriations, involving funds not yet legally appropriated. A contract indefinite as to price may, in some governments, be legally awarded for longer than a year, since it does not involve a fixed amount.

A further means for getting around this budgetary restriction is through the use of "continuing agreements." These are contracts

for a definite initial period, subject to indefinite extension of time at the same terms as long as mutually agreeable to both buyer and seller. Either contracting party is usually required to give the other ample notice of its intent to terminate the contract, which allows the buyer time to locate another satisfactory supply source, and permits the supplier to negotiate other sales for his product or to curtail production. Some contracts executed by the city of New London, Connecticut, contain a "continuing agreement" clause, by which "the Company . . . . covenants and agrees with the City that it will, for a term beginning —— and ending —— *and thereafter until — months' written notice of termination shall be given by either party hereto to the other.*" The contract further provides: "It is mutually agreed that in case the Company, after the expiration of the term of this contract, . . . shall continue to furnish (name of commodity contracted for) without the execution of a new contract in writing relating thereto for such additional time, said Company shall be paid by the City at the rates and in the manner provided for herein." With a "continuing agreement" in effect, the government is spared the effort and expense of negotiating a new contract or renewing the old one in the regular and formal way. Naturally its use should be confined to staple articles of supply, the need for which will continue indefinitely.

Contracts are often indefinite as to *quantity*. All contracts executed by the General Supply Committee for the federal government have until recently been definite in price only. The government agrees to buy all its requirements from the contractor, but does not obligate itself to purchase any definite quantity. As already explained, the General Supply Committee now purchases some commodities in definite quantities for the combined requirements of all the departmental, and some of the field services, on a "definite and additional quantity" contract.[7] Bids are received and the contract is awarded for a certain unit price, based on the total quantity needed for the term of the contract, usually three months. The supplier also agrees to furnish "additional quan-

[7] See Chapter II, pp. 26, 27.

tities" at the same or a slightly higher unit price during the life of the contract. Using agencies which have underestimated their requirements can still secure the benefit of the lower unit price by ordering additional quantities direct from the contractor at the price stated on the published contract.

Dallas contracts for ice annually at a definite price per ton, but for an indefinite quantity. Delivery is made in small quantities as needed to each office and institution of the city government. The contractor bills the city monthly at the contract price for the total quantity delivered. The city thus secures a wholesale price on the bulk purchase, although delivery is made in retail lots.

The city of Salem, Massachusetts, sometimes contracts for a quantity "not to exceed" a certain maximum, but reserves the right to buy less. The city is thus protected against price decline, for it can abrogate the contract and buy in the open market. Such contract is obviously unfair to the supplier if large quantities are involved or if the articles have been specially produced and cannot be sold elsewhere.

Many governments provide in the contracts for a certain per cent increase or decrease in the quantity ordered at the option of either contracting party. Boston binds the supplier to furnish additional quantities at the same price while reserving for itself the right to decrease the quantity if the requirements have been overestimated, to wit: "The quantity mentioned in the contract is merely an estimate of what will probably be required, and it is therefore expressly understood and agreed that the City does not bind itself to accept of the undersigned the full quantity specified unless required by the needs of the department. And it is further understood and agreed that if the needs of the department require the use of larger quantities than those specified, then the undersigned shall furnish the city such additional quantities and at the same price as specified herein." Although by the terms of this contract the city of Boston seemingly has the advantage from all points of view, it probably pays for this advantage in increased prices.

The Philadelphia contract for coal gives only the "approximate

quantities required," and the city reserves the right to increase or diminish them according to need. Meats, coal, rubber hose, and fuel oil have been purchased by the state of Washington on an "approximate quantity" contract, delivery to be made upon direct order or "requisition" from the using agency. As already pointed out, the states of Maryland and New York reserve the right on all purchases to increase or decrease the amount by 10 per cent (See Figure 23).

Contracts may also be indefinite as to *price*. In purchasing coal, Philadelphia agrees to pay the supplier for any advance, and likewise secures the benefit of any decline, in miners' wages or freight rates, during the life of the contract. Dayton and Cleveland have entered into contracts in which the market price was subject to price fluctuation. In its annual contracts for fuel oil; rubber, leather, and canvas belting; rubber hose; and some other commodities, the state of Washington is protected against price advance but is guaranteed the benefit of any price decline during the contract period. The unit price as stated in the contract is the maximum to be paid by the state.

The contract price may also provide for a "sliding-scale" discount, depending upon the total quantity purchased during the contract period. For example, the state of Washington contracted in 1923 for incandescent lamps at 31 per cent and 21 per cent discount, for full case and broken case lots, respectively, on a total purchase, during the year, of $5,000. If the total business amounted to $10,000 during the year, the supplier agreed to give the state an additional 2 per cent discount, deductible as a "bonus" at the close of the contract period.

The state of Washington has made a conspicuous success with a special kind of contract in which both price and quantity are indefinite. Like the General Supply Committee of the United States government, the state of Washington agrees to purchase all its requirements for the contract period from the contracting supplier, but does not agree to purchase any definite quantity. Bids are received and the contract is awarded on the basis of a certain *discount from the current market price at time of purchase.*

For example, by the terms of the contract, the supplying company agrees to furnish tires and tubes to any state-owned car from any of its distributing and sales stations at any time during a year. Each month the state of Washington is billed by the supplier for the tires and tubes furnished during the preceding month. The state receives the contract discount from the wholesale market price prevailing at the time and place of each purchase. If, during the next month, the market has risen, the state still receives its contract discount but pays correspondingly higher prices; and vice versa, if the market has declined. The contract permits the state to buy and store in any one month an entire year's requirements if it wishes to do so; or it may buy in small lots as needed, eliminating the expense of storage. Gasoline, lubricating oil, and batteries are purchased annually by the state of Washington on the same kind of contract. This method is also used by Fresno County, California, in purchasing gasoline and lubricating oil.

The indefinite price and quantity contract, with a constant discount from the current market price, seems equitable both to the buyer and the seller, and largely removes the speculative element from long-term contracts. It appears worthy of more widespread trial by other governments.

3. "Cost-plus" Contracts.—By this plan the contractor agrees to furnish certain commodities or services at cost plus a certain per cent profit, or at cost plus a fixed sum. The total amount to be paid is indefinite. This contract form is used in construction projects which must be completed at any cost or in the furnishing of articles which require special production. It was popular with the federal government during the World War, but is now seldom used. The "cost-plus" contract is conducive to extravagance and waste; since the contractor's profit is in direct ratio to the cost, he is encouraged to spare no expense. In some governments, for example the state of Montana, cost-plus contracts are now prohibited by law.[8]

"Cost-plus" is quite frequently the basis of payment for extra work which is required for completion of a project but which

[8] Laws of 1927, chapter 149.

was not included in the contract. Such extra work is often furnished on a "force account" by which the contractor places his forces, or part of them, at the disposal of the government. Separate accounts are generally kept of the cost of personal services and materials furnished, and the contractor is reimbursed for such costs, plus a certain percentage, usually 15 per cent, to cover the overhead cost of administration, the use of tools and machinery, liability insurance, and profit. If extra work is to be furnished on a force-account basis, a provision to this effect should be made a part of the contract.[9]

4. Revocable Contracts.—San Francisco has recently purchased plumbing supplies on a revocable contract. The contract is definite as to time and price, but indefinite as to quantity, and any item in the contract may be revoked by either the city or the supplier upon fifteen days' notice to the other party. This protects the city against unsatisfactory deliveries and price decline, and protects the supplier against serious loss through price increases.

The Purchase Order

As stated at the beginning of this chapter, a purchase order is a less formal document, and usually involves a smaller expenditure and covers a shorter period, than a contract. A purchase order, however, often involves a large amount if it calls for immediate delivery; the need for legal protection to the buyer against nonfulfillment is less if the time between purchase and delivery is short. Since a contract usually requires careful scrutiny and approval by several different officials, the purchase can be made much more expeditiously through the use of the order form. A purchase order is legally a contract, but is treated separately here on account of the marked difference in the procedure involved.

Contents of an Order.—Although no two governments use identical forms, most orders contain the following essential data:

[9] Force accounts and their administration are fully and clearly discussed in *Force Accounts on Unit-Price Construction Contracts,* published, 1928, by The Thomas Skelton Harrison Foundation of Philadelphia.

1. Number.—Every purchase order bears a serial number, assigned by the issuing office and almost invariably placed in the upper right-hand corner of the form. The number is generally filled in when the order blanks are printed. The supplier is usually instructed to place the order number on all shipments and on the invoice.

2. Date of Order.—This information, like the order number, is essential for reference purposes.

3. Requisition Number.—One or more numbers may be given, depending upon whether the order fills one or a plurality of requisitions.

4. Appropriation to be Charged.—The appropriation account to which the order is chargeable is usually indicated on the order for the benefit of the finance department. The proper account number may be filled in after "charge accounts" or "charge to appropriation item number," or after "code number" if *matériel* requirements have been classified.

5. Name and Address of Supplier.—This is always stated, for reasons which are self-evident.

6. Shipping Address.—The supplier must know whether delivery is to be made at a central point or at one or more of the using agencies.

7. Shipping Route.—If the supplier is located at a distance and if delivery must be made by freight, the best route should be stated. The New York state purchasing office, as a part of its printed conditions of purchase, furnishes a list of all the state using agencies and shows the railroad lines which make deliveries to each. The preferred transportation method, such as via "truck," "express," or "freight," is filled in on some orders.

8. Delivery Date.—The delivery date should correspond with the date specified on the inquiry form which requested bids, and should be the date when delivery is actually required. Many orders stipulate delivery "at once" or "immediately," which is an invitation to the vendor to disregard it. Carelessness in this important detail increases the work of the follow-up or traffic clerk

and gives rise to endless annoyances and disputes between the requisitioner and the buyer and between the buyer and the seller.[10]

9. What is Ordered.—The commodities or services being purchased should be clearly and accurately described, with full and complete specifications. Exactness of description is important, since the order legally obligates the government for the amount involved. Before the order is issued it should be most carefully checked as to specification, quantity, and unit and total price, to eliminate stenographic errors.

10. Price, Discount, Terms.—The unit and total prices should be stated if possible. The total price, however, may not be known if the order is for an indefinite quantity. The discount for prompt payment, as stated on the seller's bid, is copied on the order by the buyer. The order also states after "f.o.b." whether the government or the supplier is to pay the delivery charges.

11. Conditions of Purchase.—These vary widely. Some governments impose very few conditions; others aim to cover every possible contingency. Any state laws restricting the products purchased or their manufacturing process, which are made a part of a contract, are also generally cited on an order. East Cleveland, Ohio, prints conditions on the reverse side of the order, but this practice is less common among governments than among private corporations. Salt Lake City guards against favoritism by printing on the order form: "If an official or employee of this city is interested in any way in your business, return this order immediately for cancellation."

12. Instructions for Submitting Invoice.—Most orders tell the vendor in what form to submit his invoice. Some governments are content with one copy of the invoice; others require duplicate copies; and some require invoices in triplicate.[11]

13. Signature of Buyer.—The order is signed by the purchasing agent or his authorized representative. In large offices, the purchasing agent cannot personally check each order issued;

[10] See Chapter VII, pp. 162, 163.

[11] This subject is fully discussed in Chapter XI, pp. 287, 290.

but he usually signs all orders after they have been checked by one of the buyers or by the order clerk. Emergency orders or "direct purchase orders" are usually signed by the head of the using agency.

The certification of the finance department as to sufficiency of appropriation usually appears on the copy of the order retained by the purchasing office, but not on the copy sent to the vendor.[12] However, in Lima, Ohio; Waltham, Massachusetts; St. Paul; Camden, New Jersey, and some other governments, the signature of the comptroller or auditor is affixed on the original copy which goes to the vendor. In Lima, the order carries also the signature of the city manager; in Waltham, the signature of the mayor.

The various copies of the purchase order are often signed by different officials, as will be pointed out later. In the usual procedure, only the signature of the purchasing agent is affixed on the order proper which is sent to the dealer.

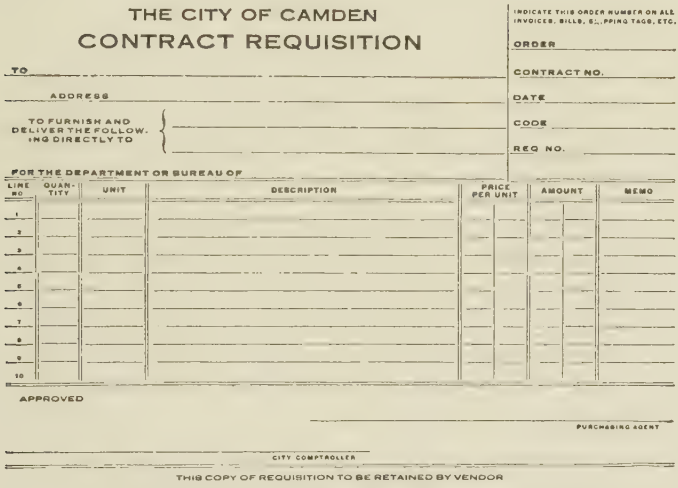
Kinds of Orders.—The following are representative of the different kinds of orders now in use by governments:

1. Regular.—The majority of all orders may be classed as "regular." The regular order may fill one requisition or may represent several consolidated requisitions. It may be confined to a single commodity or service or may cover several items. A regular order may be used for an informal or open market purchase, for a formal purchase after advertising and sealed bids, or for an "emergency" purchase without competitive bids, when issued by the purchasing office.

2. "Requisition" on Contract.—If the contract provides for delivery in quantities "as needed," the order is issued either on a regular form or on a special form called a "requisition." The form used in Camden, New Jersey, is representative (Figure 31). This form, as will be noted, bears a regular order number, and also the number of the contract. This form is made out in triplicate, and all three copies are signed by the purchasing agent and by the comptroller. The original is sent to the vendor as the order; the

[12] This phase of fiscal control is also fully discussed in Chapter XI, pp. 285, 286.

duplicate is retained by the purchasing office; and the third copy is sent to the requisitioning agency as a notice that delivery has been requested. A contract requisition may be issued by the purchasing office upon receipt of a regular requisition; it is sometimes typed by the requisitioning agency and forwarded to the purchasing office for the approval of the purchasing and finance officials; or it may be prepared and issued by the using branch without reference to the central office. The last method is followed in several states, where the purchasing office may enter into



THE CITY OF CAMDEN
CONTRACT REQUISITION

INDICATE THIS ORDER NUMBER ON ALL INVOICES, BILLS, SHIPPING TAGS, ETC.

ORDER

TO

CONTRACT NO.

ADDRESS

DATE

TO FURNISH AND DELIVER THE FOLLOWING DIRECTLY TO

CODE

REQ NO.

FOR THE DEPARTMENT OR BUREAU OF

LINE NO	QUANTITY	UNIT	DESCRIPTION	PRICE PER UNIT	AMOUNT	MEMO
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

APPROVED

PURCHASING AGENT

CITY COMPTROLLER

THIS COPY OF REQUISITION TO BE RETAINED BY VENDOR

FIG. 31. REQUISITION FOR DELIVERY ON CONTRACT, CAMDEN, NEW JERSEY (8″×5½″)

contracts providing for delivery upon request of the state using agencies. Figure 32 illustrates the "requisition" by which the using branches place orders on the stationery contract negotiated by the central purchasing office of the state of Washington.

By the Washington state contract method explained above, the supplying firm furnishes automobile tires and tubes to any driver of a state-owned motor car upon application at any of its distributing or service stations. Each driver of a state car is supplied with a book of blank orders or "requisitions." The cover of the book bears the signatures of the district sales manager of the

contracting firm, the driver, and the head of the state department or institution to which the car is assigned. Any distributing or service station of the Firestone Tire and Rubber Company (the contractor in this case) in the state of Washington is authorized to furnish the required tires or tubes upon presentation of the order blank (Figure 33) which serves also as a delivery receipt.

State Form No. 1407—1922.. Approved by Department of Efficiency.

STATE OF WASHINGTON

REQUISITION

For Stationery Supplies

Req. No..... *Date*.....

To.....

.....

Ship to..... *at*.....

Invoice to..... *at*.....

Price F. O. B. Destination..... *Signed*.....

.....

The articles named below to be of the quality and price as contained in current stationery contract.

Quantity	ARTICLE	Brand or Number	Price	Unit

FIG. 32. REQUISITION BY USING AGENCY FOR DELIVERY ON STATIONARY CONTRACT AWARDED BY STATE PURCHASING OFFICE OF WASHINGTON (5½″×8″)

All orders in the book bear the same number to identify the holder. The form is made out in triplicate. The original is forwarded by the supplying dealer to the state office of the Firestone Company, as the basis for the monthly invoice against the state; the duplicate is retained by the dealer; and the third copy is forwarded by the driver or his supervisor to the state finance department for checking with the monthly invoice.

Each using agency in Dallas is supplied with a book of coupons for securing ice on the annual contract discussed above. Each

coupon is a requisition for a certain minimum quantity of ice and is also a delivery receipt. All the coupons received in a certain month accompany the invoice against the city as supporting data. Gasoline also is purchased for city-owned cars by the coupon method in Birmingham, San Francisco, and some other cities.

3. Emergency Orders by Using Agency.—Occasionally circumstances demand immediate purchase without reference to the central office. This is common in large states, where the using agency may be at a remote distance from the central office; but occurs less frequently in cities where the central purchasing office can be consulted easily and without delay and should be prepared to purchase as quickly as the using branch itself. Genuine emergencies are bound to arise, and the well-ordered purchasing system should recognize them by providing for direct purchases. The problem is to confine such purchases to real emergencies and to prevent their employment as an excuse to purchase decentrally. In a survey of the purchasing system of Rochester, New York, the Bureau of Municipal Research of that city reported that in 1922 over 35 per cent of the total purchases were made by the using agencies directly on the ground of "emergencies," and that in addition a considerable proportion of purchases were made on blanket authorizations issued by the

DELIVERY RECEIPT

Firestone Tire & Rubber Co.

By Dealer .....

Date ..... Town .....

Delivered to State ..... [Car or] [Truck] License No. .....

Department or Institution .....

PNEUMATIC TIRES

Number Delivered	Size	State Whether Fabric or Cord	Serial Number

INNER TUBES

Number Delivered	Size	RED or Gray	

SHIP TO

Department or Institution .....

Address .....

SOLID TIRES

Number Delivered	Size	State Type	Serial Number

SHIP

Received above and Firestone Tire and Rubber Co. is authorized to Charge to following Department of the State of Washington:

Department or Institution .....

Address Where Invoice is to be sent .....

Per .....

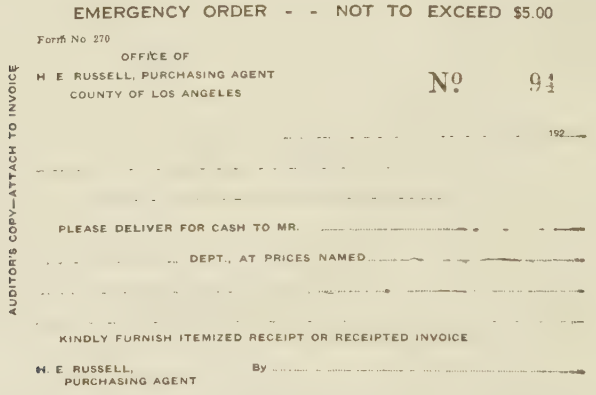
Dealer must see that signature on this receipt is same as on front cover. 192

FIRESTONE COPY

FIG. 33. ORDER FORM FOR DELIVERY OF AUTOMOBILE TIRES AND TUBES, ISSUED BY DRIVER OF STATE-OWNED MOTOR VEHICLE, ON CONTRACT AWARDED BY STATE PURCHASING OFFICE OF WASHINGTON (3″×5½″)

purchasing office to the using departments, reading "supplies for month." The various departments then made their own purchases on these authorizations from their favorite sources of supply.

Direct purchases by using agencies have been almost entirely obviated in Lima, Ohio. In an emergency the using agency telephones to the purchasing office, and the latter telephones an order to the supplier and confirms it by mail with a regular order. The using agency is then notified by memorandum that the telephone order has been placed and that unless confirming requisition is


EMERGENCY ORDER - - NOT TO EXCEED $5.00

Form No 270

OFFICE OF
H. E. RUSSELL, PURCHASING AGENT
COUNTY OF LOS ANGELES

No 94

192

AUDITOR'S COPY—ATTACH TO INVOICE

PLEASE DELIVER FOR CASH TO MR.

DEPT., AT PRICES NAMED

KINDLY FURNISH ITEMIZED RECEIPT OR RECEIPTED INVOICE

H. E. RUSSELL,
PURCHASING AGENT

By

FIG. 34. EMERGENCY ORDER FOR AMOUNTS LESS THAN FIVE DOLLARS, LOS ANGELES COUNTY, CALIFORNIA (6"×3¾")

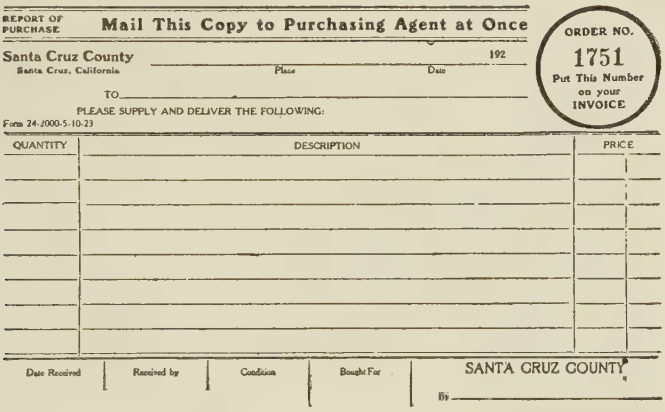
received at purchasing office within twenty-four hours "settlement will have to be made between you and the firm from whom the goods were obtained." A somewhat similar procedure is followed by Oakland, California.

Los Angeles County uses a special form (Figure 34) for cash emergency purchases less than $5 in amount. Such purchases are defrayed from a petty cash fund, reimbursed by the county auditor upon presentation of copy of the order and the receipted invoice. The duplicate copy of the form is retained by the vendor.

Foremen of road construction crews in Santa Cruz County, California, carry order books for direct purchases in emergency.

The original is given to the vendor as his order; the duplicate (Figure 35) is forwarded to the purchasing agent as a delivery receipt and explanation of need for purchase; while the triplicate, on flimsy paper, remains in the order book for the foreman's record. When approved by the purchasing agent, the duplicate copy is sent to the county auditor for checking with the invoice from the vendor.

The Dallas emergency order form is issued in three copies. The head of the department or institution gives the vendor the


REPORT OF PURCHASE

Mail This Copy to Purchasing Agent at Once

ORDER NO. 1751 Put This Number on your INVOICE

Santa Cruz County
Santa Cruz, California

Place _____ Date _____ 192

TO _____

PLEASE SUPPLY AND DELIVER THE FOLLOWING:

Form 24-2000-5-10-23

QUANTITY	DESCRIPTION	PRICE

Date Received | Received by | Condition | Bought For

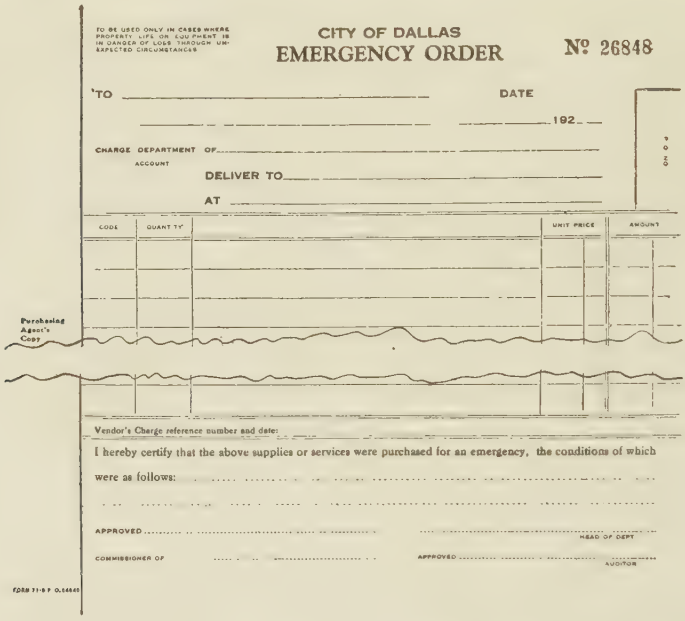
SANTA CRUZ COUNTY

By _____

FIG. 35. EMERGENCY ORDER ISSUED BY ROAD FOREMEN, SANTA CRUZ COUNTY, CALIFORNIA (7″×4¼″)

original as the order and retains the triplicate for his records. The duplicate copy (Figure 36) is sent to the purchasing agent, bearing the written explanation of the circumstances and the approval of the commissioner in charge of the using department. If the commodities or services were purchased for later delivery, the emergency order is confirmed by a regular order whose number is placed in the bracket at the upper right-hand margin, and the copy of the emergency order is handled as a regular requisition. As stated in the upper left-hand corner, the emergency order is "to be used only in cases where property, life or equipment is in danger of loss through unexpected circumstances."

(*a*) *Controlling emergency purchases.*—Keeping emergency purchases within bounds is a perennial problem of most purchasing systems. Various methods are employed for doing so, with different degrees of success. If centralized purchasing has the wholehearted backing of the governor, mayor, city manager, or county board, emergency purchases can be almost entirely elimin-


TO BE USED ONLY IN CASES WHERE PROPERTY, LIFE, OR EQUIPMENT IS IN DANGER OF LOSS THROUGH UNEXPECTED CIRCUMSTANCES

CITY OF DALLAS
EMERGENCY ORDER

No. 26848

TO _____ DATE _____ 192__

CHARGE DEPARTMENT OF _____ ACCOUNT

DELIVER TO _____

AT _____

CODE	QUANTITY		UNIT PRICE	AMOUNT

Purchasing Agent's Copy

Vendor's Charge reference number and date: _____

I hereby certify that the above supplies or services were purchased for an emergency, the conditions of which were as follows: _____

APPROVED _____ HEAD OF DEPT.

COMMISSIONER OF _____ APPROVED _____ AUDITOR

FORM 71-B7 O.56845

FIG. 36. EMERGENCY ORDER FORM, DALLAS, TEXAS (8½"×10¼")

ated. In Mobile, Alabama, purchases may be made by the using agency only when the purchasing agent is inaccessible by telephone. Philadelphia limits such purchases to the most extreme emergencies. Even then a requisition is filed and a confirming order is issued by the purchasing office in the regular way.

In forty-one cities the consent of the purchasing agent or city manager must be secured before a purchase is made directly by the using agency. A similar requirement is enforced in a number of cities with other forms of government. This requirement is

a poor deterrent, however, if the purchasing agent gives his consent perfunctorily. The consent of the purchasing authority is required in eight states for such purchases except in crises or extreme emergencies. In Vermont such authorization is required for expenditures over $25.

Emergency purchases are curbed to some extent by limiting each order to a certain maximum amount. In New York City and Youngstown, Ohio, the maximum is set at $1,000; at $100 in Fresno, California; at $50 in Denver; Augusta, Georgia; and Kokomo, Indiana; at $25 in Los Angeles and San Francisco; at $10 in Boston, and Winston-Salem, North Carolina; and at $2 in Detroit, and Columbus, Ohio. No using agency of Los Angeles may place emergency orders totaling more than $100 during any one month, without special authorization from the purchasing agent who may increase the maximum to $500 in any month. Direct purchases by using departments and institutions of the state of California are limited to perishable commodities not exceeding $100 in value, and only then in emergencies unless a special permit has been secured from the department of finance.

If direct purchases are limited to small amounts, such as $25 or less, they will concern only small and miscellaneous purchases on which little if any saving could be made by central purchase. This plan, if strictly enforced, may be an effective curb on the so-called "emergency" purchase; but if not strictly enforced, it may encourage splitting of large orders into several of small amount as a means of evading the law.

The provincial treasurers of Nova Scotia and Manitoba are permitted by law to deduct from the salary of the officials concerned any excess over current market prices paid for emergency purchases. This also is an effective deterrent.

4. "Local" Purchases.—The problem of local purchases is confined almost entirely to states and counties. Since in cities the entire government is generally "local," there is little need for direct buying by the using branches. In large states with widely separated institutions, it is essential that certain classes of commodities be purchased locally. The exempted commodities should

be confined to sand, gravel, fruits, vegetables, and perishables which can often be bought from local producers in better quality and at more satisfactory terms than through the central office. The institutional agencies of many states are given a petty cash or contingent fund, which is reimbursed as needed from the state treasury.

In certain states, for example Virginia, perishable foodstuffs are exempted by law from central procurement. The purchasing agencies in six states are granted the power to formulate rules and regulations stating what classes of commodities may be purchased locally by the state institutions. The Kentucky law provides that each state institution may purchase locally "supplies to provide for current necessities" to the amount of $500 per month. But each institution must submit to the state purchasing commission a detailed monthly report on such purchases showing the articles bought, the source of supply, and the price paid for each. As noted in the preceding chapter, the state institutions of Virginia can purchase any article from the local dealer whose bid meets the best bid received by the state purchasing agent.[13]

Certain state purchasing offices issue blanket authorizations for local purchases of certain commodities. In California such authorizations are issued quarterly; in New Jersey, Idaho, and South Dakota they are issued for variable periods. An authorization for direct or local purchase may cover only one order, or it may cover all necessary purchases of a certain commodity for a certain future period.

The purchases made under such authorizations should be carefully checked as to price by the central office. Direct purchase authorizations in New Jersey require that copies of all orders shall be sent to the purchasing department. But "little attention is given to this request by using agencies. During the past year only about 100 out of 511 direct purchase orders involving the purchase of several thousand items were returned. The purchasing department should not issue direct purchase order authoriza-

[13] See p. 179.

tions at all unless it makes sure that the using agency will report its expenditures in this connection." [14]

The form used in South Dakota for direct purchases by the

ORIGINAL

DIRECT PURCHASE ORDER

(Requisition Order)

Indicate this order number on all vouchers, bills, shipping tags, etc.

Order No. 2493 V

Contract No.

To .....

Address .....

Please enter our order as indicated below for Shipment or Delivery to

DIVISION OF EMPLOYMENT—CAPITOL CUSTODIAN
PIERRE, S. D.

Department of .....

Shipment must be addressed as above.

Date

Code

Req. No.

F. O. B.

Delivery

Terms

NOTICE TO VENDORS

Bill on special vouchers supplied herewith, in duplicate, sending vouchers direct to consignee named above. Address all communications regarding this order direct to consignee institution or department, and refer to order number. All goods or service must be billed at the agreed price, which shall include delivery charges unless otherwise specified. Vendors must receive confirmation on this form of all orders received otherwise. All vouchers must bear this order number.

Line No.	Quantity	Unit	DESCRIPTION	Unit Price	Amount	Memo

This Direct Purchase has been authorized by the Division of Purchasing and Printing, Pierre, by its Authorization No.....

.....
Purchasing Officer.

This copy to be retained by VENDOR

FIG. 37. DIRECT PURCHASE ORDER ISSUED BY USING AGENCY ON AUTHORIZATION OF STATE PURCHASING OFFICE OF SOUTH DAKOTA ($8\frac{1}{2}'' \times 11''$)

using agencies (Figure 37) bears the number of the authorization of the central purchasing office. The blank order forms are furnished by the central office, and are numbered serially, so that each can be accounted for. The duplicate copy is forwarded to the

[14] Quoted from "State Purchasing Procedure," *Staff Interim Report No. 1*, to the New Jersey Joint Legislative Survey Committee, submitted September 10, 1925.

state purchasing office, when the order is issued, for examination and checking of prices. The third copy is retained by the ordering agency, while the quadruplicate is forwarded to the state auditor for checking with invoice. All copies are signed by the purchasing officer of the using agency. The Idaho state purchasing office also receives a copy of every local purchase order, with this signed statement by the local buyer: "I hereby certify that the items specified in this order are absolutely necessary; that they are to be used for the benefit of the State of Idaho; that there is proper authority of law and sufficient balance in the appropriation for the purchase of same."

Size and Number of Copies of Order.—Most regular order forms are 8½ inches wide and either 5½ or 11 inches in length. The form used in Cedar Rapids, Iowa, only 5 inches wide and 2¾ inches long, is impractical on account of the inconvenience of filing and the danger of loss.

The "national standard purchase order form," originally devised by the National Association of Purchasing Agents in 1922, is now a part of simplification project number thirty-six of the division of simplified practice, United States Department of Commerce. This form is 8½ inches wide and 7, 11, or 14 inches long. No recommendation is made for the standard phraseology or standard number of copies. As in the "national standard inquiry form," the characters and information on the order are to be located within seven prescribed "zones," but the information in each zone may be adapted to the requirements of the user.[15] The regular order forms used by the state purchasing agencies of South Dakota and Maryland conform to the national standard recommendation.

In almost all purchasing systems, the various copies of the order form have different colors to facilitate proper distribution. In Oneida and Onondaga counties, New York, all copies of each order are of the same color, but a different color is assigned to each large using agency. All copies of orders and card records relating to the county home may be, for example, white; the county

[15] See Chapter VII, pp. 156, 157.

jail, pink; the county hospital, blue; and all other using agencies, yellow. This plan facilitates the finding of records in the file, and supplements the order number as a ready means of identification.

Regular orders are seldom issued in less than three copies: one for the vendor, another for the using agency or central stores, and the third for the purchasing office. This simple system suffices for the government in which the purchasing and finance agencies are combined or where no fiscal check is made on orders before their issue. An extra copy is usually made for the finance officer as a basis for encumbering the proper appropriation and for checking with the invoice. Other copies may be prepared for inspection, follow-up, or for other purposes hereinafter described. The system should be adapted to local needs and should be kept as simple as possible.

The regular order form in Philadelphia is issued in eight copies. The first three copies are sent to the vendor. The original

Metchell 18977 Pl.

City of Detroit

DEPARTMENT OF PURCHASES AND SUPPLIES
710 MARQUETTE BUILDING, CONGRESS & WAYNE STS.

ORIGINAL PURCHASE ORDER

A 18876

Must appear on all Packages and Invoices

M.....

.....

Please furnish the following material for:
Dept. of.....
Division.....
Deliver to.....
Address.....
Care of.....
Delivery on or before.....

Date.....

Requisition No.....
Charge Account.....

.....

Ship Via.....

QUANTITY	UNIT	ARTICLE OR SERVICES	UNIT PRICE		TOTAL	
		Terms.				

All goods or services to be billed at the prices agreed, the same to include packing and delivery charges.

Use accompanying voucher form in billing us. Fill out in duplicate; make necessary affidavit and return both copies to this office the same day articles or services are delivered.

Our order number MUST be placed on shipping tag and delivery slip. Delivery slip must accompany each delivery.

The acceptance of this order does not in any way make the City of Detroit a party to any infringement or damage suits; such suits to be borne by the vendor.

Certificates showing the necessity for the above supplies or services and of the sufficiency of the appropriation have been received by this department.

.....Commissioner.

DO NOT OVER-SHIP OR SUBSTITUTE. FILL THIS AS ORDERED

FIG. 38. VENDOR'S COPY OF PURCHASE ORDER, DETROIT, MICHIGAN (8½"×11")

is retained as his permanent record; the second is returned to the purchasing agent, signed by the vendor as an acknowledgment of receipt of order (See Figure 45); the third copy is sent by the vendor to the receiving agency with the delivery, or with the first partial delivery. It is then forwarded by the receiving agency to

Metschall 18077 Pd.

City of Detroit

DEPARTMENT OF PURCHASES AND SUPPLIES
710 MARQUETTE BUILDING, CONGRESS & WAYNE STS.

PURCHASE ORDER

Purchasing Department's Record Copy

A 18876

M.....

Must appear on all Packages and Invoices

Please furnish the following material for:
Dept. of.....
Division.....
Deliver to.....
Address.....
Care of.....
Delivery on or before.....

Date.....
Requisition No.....
Charge Account.....
Ship Via.....

QUANTITY	UNIT	ARTICLE OR SERVICES	UNIT PRICE	TOTAL

Terms.....

DATE REC'D	QUAN.	ARTICLE OF SERVICES	AMOUNT	INVOICE		INSPECTED		FORWARDED
				DATED	RECEIVED	DATE	BY	

I hereby certify that there are sufficient funds in the account indicated to cover the cost of the articles or services called for in this order.

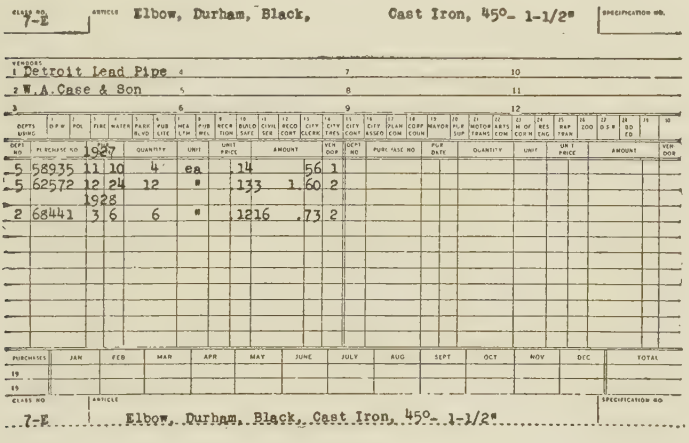
For the Controller.....

FIG. 39. PURCHASING DEPARTMENT'S RECORD COPY OF ORDER, DETROIT, MICHIGAN ($8\frac{1}{2}'' \times 11''$)

the purchasing office, together with the approved invoice and with the fourth copy which is the delivery receipt. The fifth copy is the permanent record of the receiving or using agency; the sixth is sent to the inspection division; the seventh is sent to the city comptroller for checking the invoice; and the eighth remains in the files of the purchasing office. Philadelphia has no central storage system, delivery of all orders being made to the using agency.

Detroit issues six copies of its regular order, which is used in

purchasing both commodities and services. The original (Figure 38) goes to the vendor, signed only by the purchasing agent (commissioner of purchases and supplies). The second copy (Figure 39) becomes the record of the purchasing office. It bears the certification of the comptroller as to sufficiency of funds. Spaces are provided at the bottom for entering the record of deliveries as reported by the inspector or by the receiving department, and the dates when invoices were received, inspected, and forwarded



CLASS NO. 7-E ARTICLE Elbow, Durham, Black, Cast Iron, 45°- 1-1/2" SPECIFICATION NO.

VENDORS
1 Detroit Lead Pipe 4 7 10
2 W.A.Case & Son 5 8 11
3 6 9 12

DEPTS USING	D P W	POL	FIRE	WATER	PARK BLVD	PUB LITE	HEALTH	PUB WEL	RECR TION	BUILD SAFE	CIVIL SER	RECO CONT	CITY CLERK	CITY TRES	CITY CONT	CITY ASSED	PLAN COM	CORP COUN	MAYOR	PUR SUP	MOTOR TRANS	ARTS COM	M OF CORN	RES ENG	RAP TRAN	ZOO	D S W	BD ED	10

DEPT NO	PURCHASE NO	FIRE	WATER	QUANTITY	UNIT	UNIT PRICE	AMOUNT	VENDOR	DEPT NO	PURCHASE NO	PUR DATE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	VENDOR
		1927														
5	58935	11	10	4	ea	.14	56	1								
5	62572	12	24	12	"	.133	1.60	2								
		1928														
2	68441	3	6	6	"	.1216	.73	2								

PURCHASES	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
19													
19													

CLASS NO 7-E ARTICLE Elbow, Durham, Black, Cast Iron, 45°- 1-1/2" SPECIFICATION NO

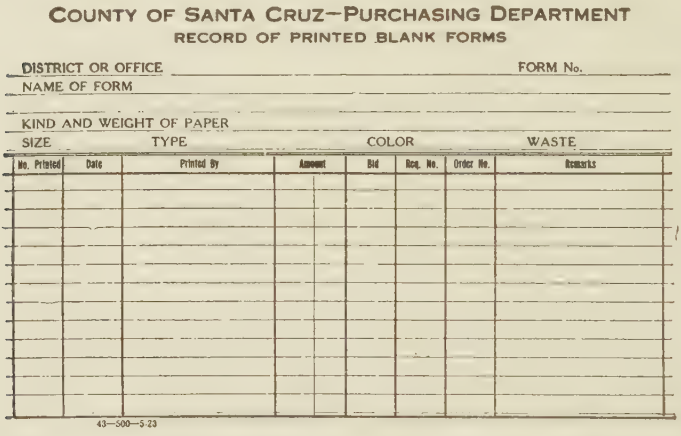
Form H81-500-1-17

FIG. 40. PURCHASE RECORD CARD, DETROIT, MICHIGAN (8″×5½″)

to the comptroller for payment. The third copy, the comptroller's, has space at the bottom for records of deliveries as reported, date of receipt of invoice from purchasing office, and date and number of voucher issued in payment. The quadruplicate is sent to the inspector (See Figure 53). The fifth copy is for the receiving clerk of the using agency and is forwarded by him to the head of his department when delivery has been completed (See Figure 50). The sixth copy is sent to the using agency for its records.

Office Procedure Following Award of Order or Contract.—After the award of the order or contract, the following procedure is necessary to establish proper records and to expedite delivery:

1. The Record of Purchase.—A record of the purchase should be made in all cases after the order or contract has been approved, signed, and sent to the vendor, and the other copies have been properly distributed. Such record is usually made on a card or ledger sheet, filed alphabetically by commodities or by commodity groups according to the established classification. This shows the total purchases of a given commodity for a certain definite period of time, gives the supplier and the price paid on each order as an index to price trends, and indicates the consump-



COUNTY OF SANTA CRUZ—PURCHASING DEPARTMENT
RECORD OF PRINTED BLANK FORMS

DISTRICT OR OFFICE _____ FORM No. _____
NAME OF FORM _____
KIND AND WEIGHT OF PAPER _____
SIZE _____ TYPE _____ COLOR _____ WASTE _____

No. Printed	Date	Printed By	Amount	Bid	Req. No.	Order No.	Remarks

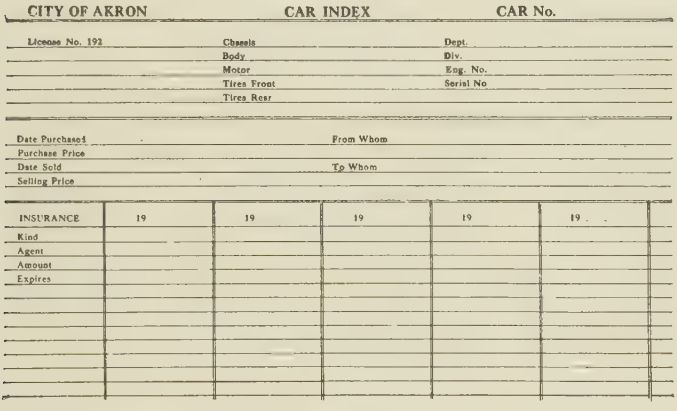
43—500—5-23

FIG. 41. RECORD OF PURCHASE OF PRINTED BLANK FORMS, SANTA CRUZ COUNTY, CALIFORNIA (6″×4″)

tion trend for each using agency and for the entire government for the period. Several methods for recording this information are in use, but the Detroit system is recommended as highly practicable. Figure 40 shows the Detroit purchase record form, filled out for a given article. The form shows at the top the commodity classification and the description of the article. Spaces are provided for the names of twelve vendors, and the identity of the vendor is indicated by the proper number inserted in the column after each purchase. The order number, date, quantity bought, and unit and total prices are given for each purchase. Each using agency of the city is assigned a number, which is inserted in the

first column to indicate for whom purchase was made. Spaces are provided near the bottom of the form to show the consumption trend for each month and the total per annum during a biennial period. Each card is filed in a separate holder, and the name and classification group of each article is repeated at the bottom for quick reference purposes. The reverse side of the card provides spaces for additional entries.

Some governments have special forms for recording the purchase of specific articles or services. Figure 41 illustrates the form



CITY OF AKRON — CAR INDEX — CAR No.

License No. 192 — Chassis — Dept.
Body — Div.
Motor — Eng. No.
Tires Front — Serial No
Tires Rear

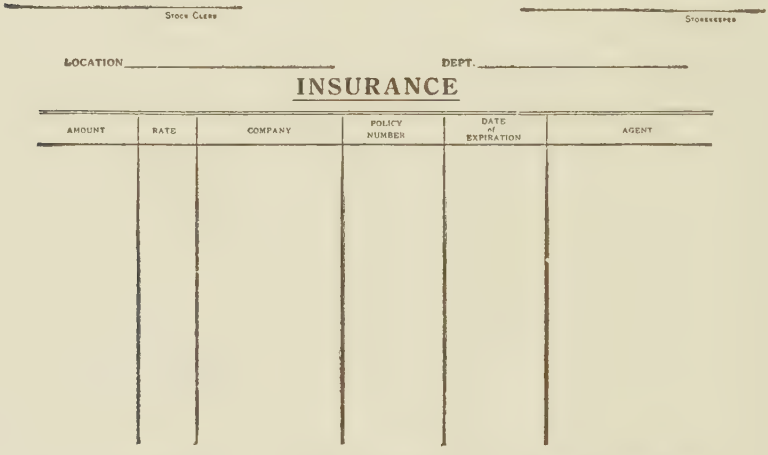
Date Purchased — From Whom
Purchase Price
Date Sold — To Whom
Selling Price

INSURANCE	19	19	19	19	19
Kind					
Agent					
Amount					
Expires					

FIG. 42. RECORD OF PURCHASES FOR MUNICIPALLY OWNED MOTOR CAR, AKRON, OHIO (8″×5″)

used by Santa Cruz County, California, for recording the purchase of printed blank forms. Its function is self-explanatory. Akron, Ohio, maintains a record of its motor equipment on a form illustrated by Figure 42. This form identifies each car by its license number and by the department to which it is assigned for use. It also provides a record of the purchase or sale of the car, and the insurance carried on it each year. The reverse side of the form is a tire and repair record, which shows the monthly cost of upkeep over a five-year period. Figure 43 illustrates a record of the various insurance policies arranged by the purchasing office of San Diego, California, for a given department of the city government.

2. The Order File.—After the record of purchase has been made, the office copy of the order is usually filed in numerical sequence either in a filing case or in a post binder. Copies of orders may be kept in a "live" file pending delivery, and then transferred to the "dead" or permanent file when delivery is completed, as the final record of purchase for reference at any future time. In Cincinnati and Youngstown, Ohio, the office copy of the order has a wider margin on the left than the other copies and is punched


Stock Clerk

Storekeeper

LOCATION_____ DEPT._____

INSURANCE

AMOUNT	RATE	COMPANY	POLICY NUMBER	DATE of EXPIRATION	AGENT

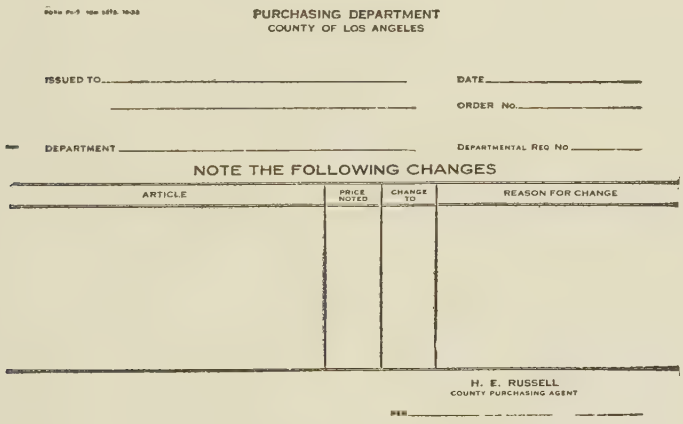
FIG. 43. RECORD OF INSURANCE PURCHASES, SAN DIEGO, CALIFORNIA (8″×5″)

for binding in a ledger. All copies of the order used in Dayton, except the original which goes to the vendor, are punched for binding in this way. The office copy of the order is available in the "live" file for reference, for entering records of deliveries and inspection reports, and for checking with invoice.

3. Change in Order.—It may be necessary, after the order is issued, to change or to cancel it. This occurs so infrequently in the average purchasing system that no special forms are used. But upon receipt of request from the using agency for an order change, with a statement of the circumstances, the purchasing agent of Los Angeles County issues the form shown as Figure 44.

Copies of this form are made for the vendor, the county auditor, the follow-up clerk, the storeroom or using department, and the purchasing office.

4. Acknowledgment of Order.—Small orders usually require no acknowledgment from the vendor. On large orders, or orders for supplies needed in emergency, the supplier should acknowledge receipt of the order and state when delivery will be made. Two satisfactory methods are in vogue. One is to send with the order a return postal card, addressed to the purchasing


PURCHASING DEPARTMENT
COUNTY OF LOS ANGELES

ISSUED TO _____ DATE _____

_____ ORDER NO. _____

DEPARTMENT _____ DEPARTMENTAL REQ NO _____

NOTE THE FOLLOWING CHANGES

ARTICLE	PRICE NOTED	CHANGE TO	REASON FOR CHANGE

H. E. RUSSELL
COUNTY PURCHASING AGENT

BY _____

FIG. 44. ORDER CHANGE, LOS ANGELES COUNTY, CALIFORNIA
(8½″×5½″)

agent, on which the vendor states the promised delivery date. The other plan is to send two copies of the order, one of which is to be returned to the purchasing office as an acknowledgment, which, as stated above, is the practice in Philadelphia. When the vendor signs the acknowledgment (Figure 45) he gives the delivery date and also tacitly agrees to the terms stated in the order. This obviates disputes and prevents the supplier from offering nonreceipt of the order as an excuse for failure to deliver.

5. Follow-up.—In many governments the using agencies follow up all orders. The central purchasing office of Milwaukee, for example, follows up an order only when especially requested

ACKNOWLEDGMENT BY CONTRACTOR
OF RECEIPT OF ORDER

OFFICE OF PURCHASING AGENT
CITY OF PHILADELPHIA
ROOMS 316-12 CITY HALL

Place Order No., Requisition No., Schedule and Item No., Point of Delivery on all Bills

ORDER Nº 17975

REQ. NO.

HEREBY ACKNOWLEDGES THE RECEIPT OF AN ORDER TO DELIVER TO

CHARGE TO

THE FOLLOWING SUPPLIES

APPRO. ITEM

SCHEDULE CLASS	SCHEDULE ITEM	QUANTITY	UNIT	DESCRIPTION	PRICE PER UNIT	AMOUNT OR ESTIMATE

DELIVERY WILL BE MADE WITHIN..... DAYS

DATE.....

.....
(SIGNATURE OF CONTRACTOR)

THE CONTRACTOR WILL INDICATE ABOVE THE DATE OF DELIVERY OF THE GOODS ORDERED AND IMMEDIATELY RETURN THIS SHEET TO THE PURCHASING AGENT

FIG. 45. ACKNOWLEDGMENT OF RECEIPT OF ORDER BY VENDOR, PHILADELPHIA, PENNSYLVANIA (8½"×11")

by the using agency to do so. This is also the prevailing method in state governments, where the responsibility for checking and inspecting deliveries usually rests in the hands of the individual institution. The purchasing agent, however, can follow up an order more effectively than the receiving and using agency. A letter from the purchasing agent will receive prompt attention and reply from the vendor, since the latter's reputation for prompt deliveries will be given weight in awarding future orders.

Copies of orders requiring prompt delivery may be marked in the order file with a tab or "flag" as a follow-up guide. Important orders are sometimes filed on cards, with an index for each business day of the month to indicate the date of promised shipment or the date for following up such promise. If the vendor returns an acknowledgment copy of the order, this may be used as a follow-up record, since it gives the promised delivery date (See Figure 45).

To be effective, follow-up must be placed in charge of an experienced clerk. The follow-up clerk should be familiar with the intended use of the goods, so that he can concentrate his attention upon those orders whose delivery is most important. The buyer should work in the closest possible cooperation with the follow-up clerk, explaining to him what orders are most urgently needed and suggesting the best methods for achieving prompt deliveries from the particular vendors concerned. In some cases, the order tracer

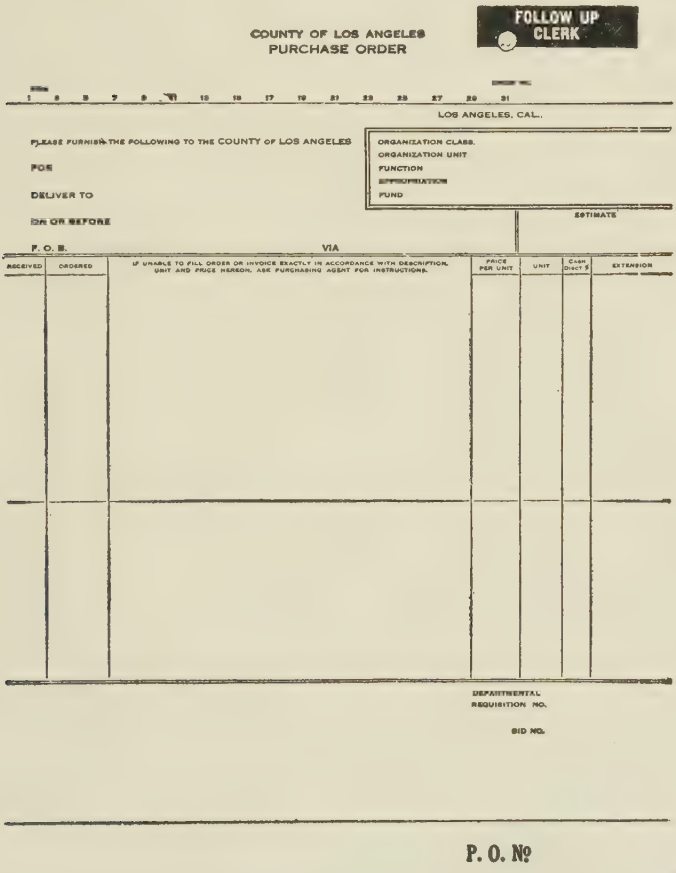


FIG. 46. FOLLOW-UP COPY OF PURCHASE ORDER, LOS ANGELES COUNTY, CALIFORNIA (8½″×11″)

or follow-up clerk may have to visit the factory or distributing point, to oversee personally the prompt shipment of the order; or he may have to follow the shipment over the transportation route to expedite its delivery.

Most large private purchasing offices, and a few governments, have a definite system in charge of a follow-up clerk. Detroit keeps an "order-tracer" so employed full time. It is his duty, not only to follow up the important orders, but also to trace shipments in transit. The follow-up clerk of Los Angeles County receives a follow-up or tracing copy of every regular order

FOLLOW UP RECORD

MEMO. DATE	LETTER MAILED	REMARKS	NOTIFIED TRAFFIC DEPT.	SHIP OR CAR	DUE
		DELIVERY PROMISED			
		ITEMS SHORT ON DELIVERY			

FIG. 47. FOLLOW-UP RECORD (REVERSE SIDE OF FIG. 46), LOS ANGELES COUNTY, CALIFORNIA (8½"×11")

(Figure 46) and of every order change (See Figure 44). The numerals from 1 to 31 near the top of Figure 46 are guides for attaching date tabs, to show the day of the month on which the order is to be followed up, or the date of promised shipment or delivery. On the reverse side is space for the follow-up record (Figure 47). The follow-up clerk is not required to trace shipments as in Detroit, but notifies the traffic clerk to do so. The follow-up on an order ceases when delivery is completed.

Overhead Cost per Order or Contract.—The overhead cost of preparing, issuing, and recording the order depends upon the system followed in each government, and therefore varies

widely. Estimates of the cost to the United States government for advertising for bids, preparing the order, securing the necessary approvals, checking and handling the invoice, inspecting the delivery, carrying the expenditure through the various auditing processes, and preparing the voucher for payment, vary from $1 to $20. A. G. Thomas of the United States Bureau of Efficiency estimates that the cost for such "paper work" averages $5 per order.[16] The purchasing agent of Fresno County, California, in his report for the fiscal year 1924-1925, states that the cost to the county for preparing and issuing each order was 64½ cents, much less than in the federal government, since the county purchasing agent was not responsible for inspection or for the various auditing processes. Also, this figure does not include the advertising costs.

The survey of the purchasing system in Toledo, referred to in the preceding chapter, showed that the city spent during 1926 an average of $2.84 on each purchase order, for all office work from the receipt of requisition to the checking of the canceled check after payment of the invoice, but exclusive of the cost of advertising for bids. Since many orders were issued in 1926 for amounts less than $2.84, the city paid more for the office routine of handling these transactions than for the goods delivered.[17]

The very considerable overhead office expense of issuing orders must be taken into account in introducing measures for economy in public purchasing and affords a powerful argument in favor of a centralized plan of procurement. When given a fair trial, centralized purchasing should result in a great reduction in the number of orders issued for *matériel* each year. Since the overhead expense of issuing an order for $5 is on an average the same as for an order for $500, the savings effected by issuing fewer and larger orders should thus be considerable. This is likewise true of advertising costs. The economies brought about through reduc-

[16] Letter to the writer, July 1, 1926.

[17] *"Survey of the Division of Purchases and Supplies,"* supplement to *The Toledo City Journal,* March 3, 1928, p. 13.

tion in the number of orders should be greater in succeeding years than in the first year of operation of a centralized purchasing system, because of increased familiarity with the needs of the using agencies and the resultant increased ability to anticipate requirements and to decrease the number of requisitions by keeping on hand a stock of staple commodities. C. E. Rightor shows that the total number of orders issued in Dayton in 1915, the first year of centralized purchasing, was 5,810; the following year, the number was reduced to 3,580; and in 1917, the orders totaled only 2,877, less than half the number issued in 1915.[18]

[18] *City Manager in Dayton*, p. 173.

CHAPTER IX

INSPECTION AND TESTING

Inspection

Checking of goods received is as essential for governmental economy as is accounting for cash received or cash paid out. Careful and uniform inspection of all deliveries is in one respect more necessary in government than in private business. The private purchasing agent may limit his supply sources, if he choose, to firms of known reliability who can be trusted to deliver what is ordered. Governments, on the other hand, are compelled by law to receive bids from any vendor who is reliable but whose service reputation may be unknown.

The object of inspection by governments is to determine whether the delivery conforms in quantity and quality with the quantity and quality purchased, and not whether the quality purchased is most suitable for the intended use or was obtained at a reasonable price. A careful system of inspection tends to raise the general quality of deliveries. When rejections are based on valid reasons, the government soon gains with vendors a reputation for knowing what it wants and for getting what it orders. Rejections may point out certain weaknesses in, and may lead to voluntary improvement of, manufacturing methods. But if, on the other hand, the inspection is based on the prejudice or fancy of the inspector, the supplier will often "take a chance," deliver inferior quality, and hope that the inspector will be kindly disposed at time of receipt.

Most important of all, an accurate inspection system emphasizes the need for, and encourages the use of, definite specifications. As pointed out in Chapter V, many of the indictments against centralized purchasing can be traced to the lack of speci-

fications. The purchasing agent may buy what he believes to be required, and the supplier may deliver according to the order. If the requisitioning and using agency inspects, delivery may be rejected because it does not meet the receiver's expectations. The supplier may thus become an innocent victim of misunderstanding between the requisitioning and buying agencies, and may be forced to accept return of his goods or a reduction in the sale price. If the inspection is made by representatives of the purchasing agency, the delivery may be accepted; the using agency will then be dissatisfied and will blame the purchasing system or the obtuseness of the buyer. But if specifications are formulated and used, the requisition, the order, and the inspection will follow the same written description. Delivery will be accepted if it conforms to the order, and rejected if it does not.

Inspection by governments as a general rule is concerned only with supplies, materials, equipment, and contractual services when they are delivered for use. Occasionally, however, governments inspect commodities during their manufacture or fabrication to insure that the finished product will meet the specifications. The United States War and Navy departments regularly inspect and test ordnance at each step in its manufacture, and some of the larger states and local governments also conduct factory inspection of commodities which they buy in large quantities. The standard form of supply contract of the federal government, referred to in the preceding chapter, provides in part that "all material and workmanship shall be subject to inspection and test at all times and places, and, *when practicable, during manufacture.*" Factory inspection is an advantage because it eliminates the transportation costs on all articles which may be found unsatisfactory, and would be rejected, upon delivery. Highways and public buildings are also, almost without exception, subject to inspection during construction. For the most part, however, inspection is made when the commodities are delivered for use.

In spite of its importance, government inspection as practised leaves much to be desired. It is often characterized by lack of uniformity. It is sometimes entrusted to a receiving clerk, who

may be qualified only to check the quantity received. The inspection consequently will be inexpert and lax. On the other hand, the inspector may be over-zealous, and ready to reject deliveries for the most trifling nonconformance. Over-rigidity of inspection is as unfair to the supplier as over-laxness is unfair to the receiver. Governments are also often charged with unreasonable delay between delivery and inspection. Perishables may be rejected on the ground of inferior quality when the government itself may be responsible for the spoilage through delay in inspection.

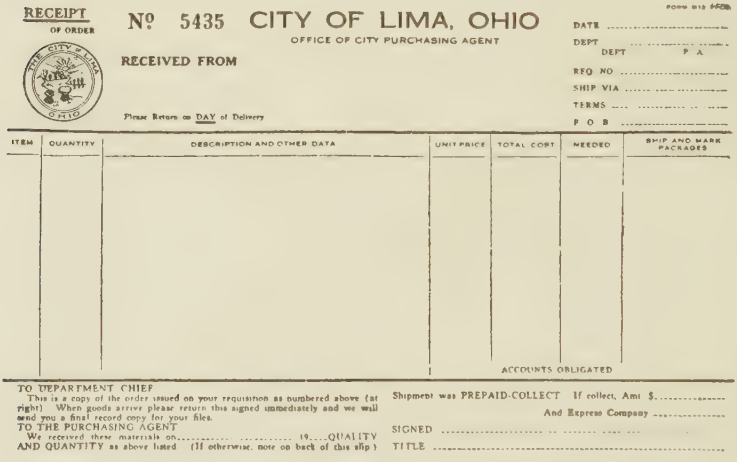
Inspection Methods.—What government agency should be responsible for inspection is a moot question. If the inspection is intended partially as a check on the work of the purchasing office, then it should be assigned to an independent and impartial branch of the government. If inspection is designed as a check on the vendor and to enforce compliance with purchase specifications, then it may be part of the rightful function of the purchasing office. Inspection by the purchasing agency tends, it is charged, to lower price at the expense of quality; contrariwise, inspection by the receiving and using agency is charged with elevating quality at the expense of price. Some advocate inspection by the finance department as a third and impartial party. All three methods have been tried and are successfully practised in governments at the present time. The choice of method should depend upon local circumstances.

1. By the Receiving Agency.—Very few governments have a corps of regular inspectors, but depend instead upon the receiving agencies to inspect the deliveries. Few states could afford to employ a corps of traveling inspectors on account of the territory involved. In some cases, the purchasing agency inspects deliveries to the departments located in the state capitol or to a central storeroom. But in every state having centralized purchasing, the state institutions inspect for themselves.

Practically all *matériel* used by the United States government is inspected by the receiving departments and establishments. Through the efforts of the Federal Purchasing Board, however, arrangements have been made for the departments best fitted to do so, to make inspections for other departments, oftentimes at

a considerable saving in traveling and overhead expenses. Meats and other foodstuffs, for example, are inspected by the bureau of animal industry of the United States Department of Agriculture for government hospitals in Boston, for the army and navy depots in several places, and for the Brooklyn depot of the United States Shipping Board.

The receiving official, who may be the storekeeper or the using department head, generally reports delivery to the purchasing officer. Figure 48 illustrates the form used in Lima, Ohio, for



RECEIPT OF ORDER

Nº 5435 CITY OF LIMA, OHIO

OFFICE OF CITY PURCHASING AGENT

RECEIVED FROM

Please Return on DAY of Delivery

DATE .....
DEPT .....
DEPT P A
REQ NO .....
SHIP VIA .....
TERMS .....
F O B .....

ITEM	QUANTITY	DESCRIPTION AND OTHER DATA	UNIT PRICE	TOTAL COST	NEEDED	SHIP AND MARK PACKAGES

ACCOUNTS OBLIGATED

TO DEPARTMENT CHIEF
This is a copy of the order issued on your requisition as numbered above (at right). When goods arrive please return this signed immediately and we will send you a final record copy for your files.
TO THE PURCHASING AGENT
We received these materials on..... 19....QUALITY AND QUANTITY as above listed (If otherwise, note on back of this slip)

Shipment was PREPAID-COLLECT If collect, Amt $.....
And Express Company .....
SIGNED .....
TITLE .....

FIG. 48. DELIVERY AND INSPECTION REPORT FROM RECEIVING OFFICE TO PURCHASING AGENT, LIMA, OHIO (8½″×5½″)

reporting complete delivery. This is a copy of the order which is sent to the using department at time of purchase and which is returned to the purchasing agent on the day of delivery, signed by the receiving official of the using agency, stating whether shipment was prepaid or collect, and certifying that the delivery conformed to the quality and quantity specified on the order. Explanation of rejection is made on the reverse side of the form. A partial delivery is reported on Figure 49, and Figure 48 is retained until delivery has been completed.

One copy of the Detroit purchase order (Figure 50) is sent

PARTIAL RECEIPT OF ORDER NO. _____

CITY OF LIMA, OHIO
OFFICE OF CITY PURCHASING AGENT

DATE _____
DEPT. _____
DEPT. P. A.
REQ NO _____
VIA _____
CAR NO _____

PLEASE RETURN ON DAY OF DELIVERY

RECEIVED FROM _____

Charges — Prepaid — Collect — Amount $_____

ITEM	QUANTITY	DESCRIPTION AND OTHER DATA

TO DEPARTMENT CHIEF

This form is to be used when you receive partial shipment only, which does not complete a Purchase Order. Make out this form in duplicate, retaining one copy for your file and sending the original to this office. Attach your partial receipt copies to the Form M-12 yellow copy until the order is complete and you can fill in and return Form M-12 yellow copy, showing that the order has been filled complete.

TO THE PURCHASING AGENT —

We received these materials on _____ 19____, QUALITY AND QUANTITY as above listed. (If otherwise note on back of this slip.)

Signed _____ Title _____

FORM 10 A 250 7-46

FIG. 49. REPORT OF PARTIAL DELIVERY, LIMA, OHIO (8½″×5½″)

Standard 18877 PL

City of Detroit
DEPARTMENT OF PURCHASES AND SUPPLIES
710 MARQUETTE BUILDING, CONGRESS & WAYNE STS.

A 18876

PURCHASE ORDER
Receiving Copy

Mail copy on all Packages and Invoices

Please furnish the following material for:
Dept. of _____
Division _____
Deliver to _____
Address _____
Care of _____
Delivery on or before _____

Date _____
Requisition No. _____
Charge Account _____
Ship Via _____

QUANTITY	UNIT	ARTICLE OR SERVICES	UNIT PRICE	TOTAL

Terms _____

DATE RECD.	QUAN.	ARTICLE OR SERVICES	AMOUNT	REMARKS

To Receiving Clerk:—Enter deliveries on this order in lower spaces. If full delivery of order, send this copy, signed to your department office. In partial delivery, make note of quantity received and then fill out partial receiving slip and forward same to your department office.

Approved: _____ Dept. Head. Received by _____

WARNING:—Forward this copy immediately on receipt of material. Important that same reach Purchasing Dept. without delay.

FIG. 50. DELIVERY REPORT FROM RECEIVING OFFICE TO PURCHASING AGENT, DETROIT, MICHIGAN (8½″×11″)

to the receiving office. When delivery is completed, this form is signed by the receiver, approved by the receiving department head, and by him forwarded to the purchasing office. This form acknowledges receipt of delivery only; the quantity and quality of delivery is reported on a separate form (See Figure 53) by one of the inspectors of the purchasing office. The purchasing department records both the delivery and the inspection on its copy of the order, as already shown by Figure 39.

CITY OF KALAMAZOO

Department of Public.....

CAR REPORT

Date.....

Delivered by.....Railroad

Car Initial..... Car Number.....

Loaded with Coal ☐ Cement ☐ Brick ☐ Gravel ☐ Sewer Pipe ☐ Water Pipe ☐

.....

Date Placed.....Date Unloaded.....

Amount of Material.....

.....

.....

Condition of Material.....

.....

.....

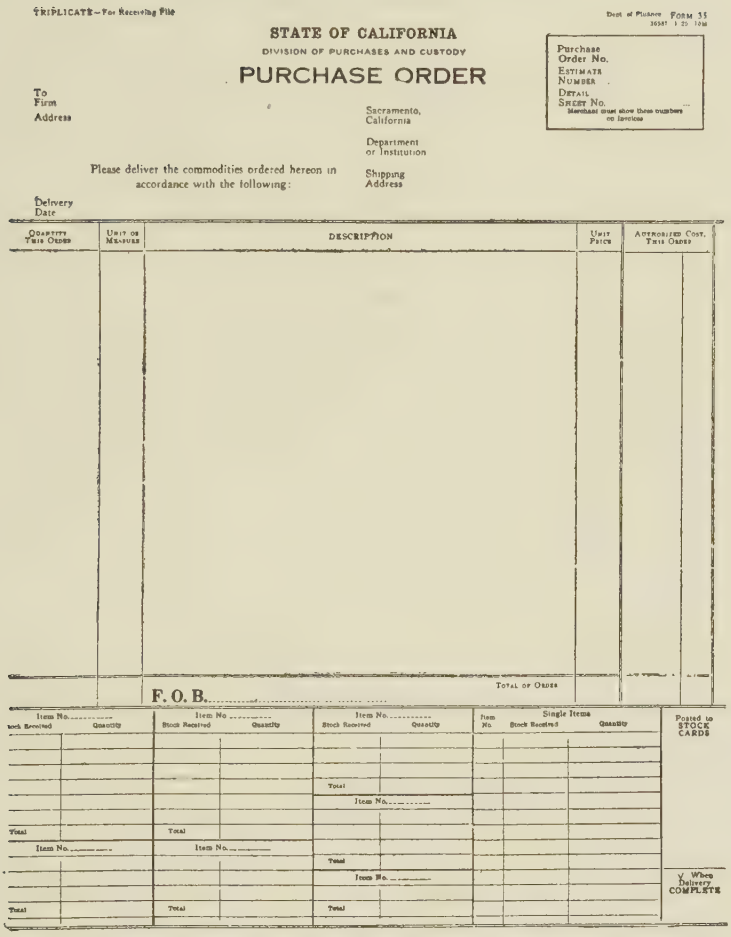
Delivered to.....

.....

Checked by

.....

FIG. 51. CAR REPORT, KALAMAZOO, MICHIGAN (8½"×11")



TRIPLICATE—For Receiving File

Dept of Finance FORM 35

STATE OF CALIFORNIA

DIVISION OF PURCHASES AND CUSTODY

PURCHASE ORDER

Purchase Order No.
Estimate Number
Detail Sheet No.
Merchant must show these numbers on invoices

To
Firm
Address

Sacramento, California

Department or Institution

Please deliver the commodities ordered hereon in accordance with the following:

Shipping Address

Delivery Date

Quantity This Order	Unit of Measure	Description	Unit Price	Authorized Cost This Order
		Total of Order		

F. O. B.

Item No. / Stock Received / Quantity	Item No. / Stock Received / Quantity	Item No. / Stock Received / Quantity	Single Items: Item No. / Stock Received / Quantity	Posted to STOCK CARDS
		Total		
		Item No.		
Total	Total			
Item No.	Item No.	Total		
		Item No.		V. When Delivery COMPLETE
Total	Total	Total		

FIG. 52. RECORD OF DELIVERY AND INSPECTION, STATE INSTITUTIONS OF CALIFORNIA (8½″×11″)

As stated in the preceding chapter, an order or contract may call for delivery as needed over a period of several months or a year. Kalamazoo, Michigan, uses a special form (Figure 51) for notifying the purchasing office of deliveries of coal, cement, brick, or other commodities in carload lots on a contract.

The inspection report from the using agency serves as a basis for checking the invoice, which, in the systems described above,

is submitted to, and checked by, the purchasing agent. Both finance and purchasing departments may, however, receive copies of the inspection report for invoice-checking purposes, as is the practice in Los Angeles and Kern counties, California, and in Cincinnati.

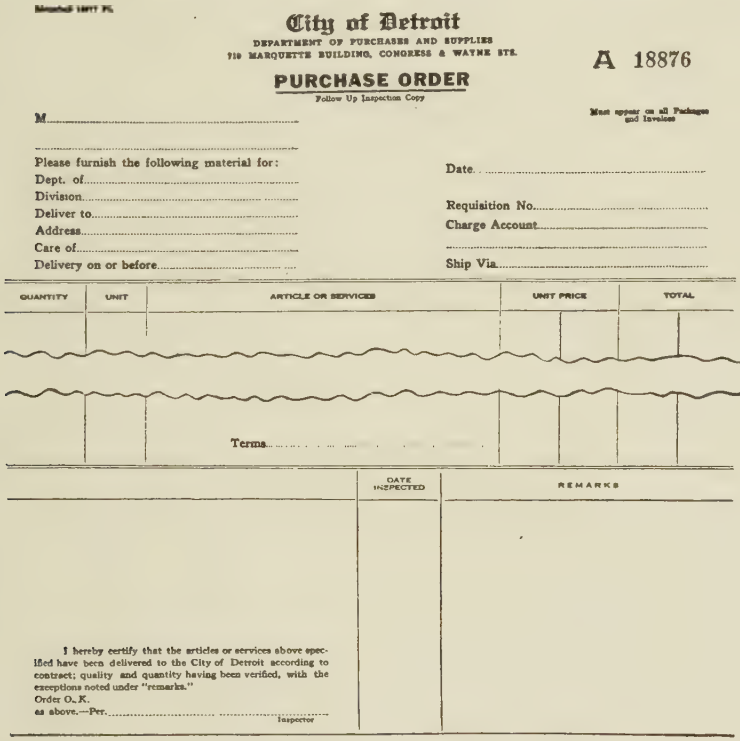
Since in some states the invoices are rendered to the using department or institution, approval of the invoice is considered sufficient acknowledgment of satisfactory delivery. In California, the receiving clerk or storekeeper of the institution records deliveries on the copy of the order (Figure 52) furnished by the purchasing office. Completion of delivery is indicated by a check on the lower right-hand corner of Figure 52 and is also noted on the two other copies of the order which are, respectively, filed with the institution bookkeeper and sent with the approved invoice to the state finance department.

Some governments do not notify the receiving agency of the quantity ordered, thus insuring an actual count of the delivery. When the purchase order is typed, one narrow sheet of carbon paper is used, so that the quantity column is left blank on the copy which goes to the requisitioning and using office. The report on the quantity delivered must therefore represent an actual count, thus obviating the possibility of perfunctory and careless inspection by the receiving clerk or departmental inspector. This practice is followed in Camden, New Jersey, in Reading, Pennsylvania, and in some other governments.

2. By the Purchasing Agency.—The purchasing agency inspects delivery to central and branch stores in the states of Maryland, New Jersey, and Ohio, and in all cities and counties where the stores system is supervised by the purchasing office.

The board of city record, buying all stationery and printing supplies for New York City, maintains a central storeroom, at which all deliveries are received and inspected and from which distribution is made in city-owned trucks as needed. Although a central delivery point facilitates uniform inspection, it is obviously impracticable for states and also for most cities because of the added cost of distribution after inspection

The purchasing agent has authority to inspect in 116 of the cities included in this study. The department of purchase in New York City has a staff of fourteen inspectors, in addition to the regular inspection staff attached to the finance department. This small group, obviously unable to inspect all deliveries, makes



City of Detroit

DEPARTMENT OF PURCHASES AND SUPPLIES
719 MARQUETTE BUILDING, CONGRESS & WAYNE STS.

A 18876

PURCHASE ORDER

Follow Up Inspection Copy

Must appear on all Packages and Invoices

M.....

Please furnish the following material for:
Dept. of.....
Division.....
Deliver to.....
Address.....
Care of.....
Delivery on or before.....

Date.....

Requisition No.....
Charge Account.....
.....
Ship Via.....

QUANTITY	UNIT	ARTICLE OR SERVICES	UNIT PRICE	TOTAL
		Terms.....		

	DATE INSPECTED	REMARKS

I hereby certify that the articles or services above specified have been delivered to the City of Detroit according to contract; quality and quantity having been verified, with the exceptions noted under "remarks."
Order O. K.
as above.—Per.....
Inspector

FIG. 53. INSPECTION REPORT, DETROIT, MICHIGAN (8½″×11″)

sample inspections at whatever points, and whenever, the purchasing department sends them.

The purchasing office sometimes inspects one or more classes of commodities, while the receiving agencies inspect all other commodities. For instance, one of the assistant storekeepers in Milwaukee takes samples of all coal deliveries, while meat received by the institutions of Los Angeles County is inspected by the meat buyer in the purchasing office (See Figures 1 and 2).

In small cities, where the deliveries are few in number, the purchasing agent himself may make all inspections, as is the practice in Waltham, Massachusetts, for example. This arrangement is likely to breed dissatisfaction among the using agencies, since

Form H-7 3m Bits S 20

CITY OF DAYTON

Purchasing Division

Order No.

Date _____ *Dep't. of* _____

P. A. Req. No. _____ *Div. of* _____

Dep't. Req. No. _____ *Bureau of* _____

Deliver to _____

ORDERED FROM

_____

_____

_____

Inspector's Copys

CODE Supply No.	Quantity	DESCRIPTION	Price Per Unit	Amount or Estimate

This Inspection Report together with Voucher Jacket must reach Purchasing Agent within 3 days after delivery of goods to insure discount.

Goods Rec.	QUANTITY	REMARKS	Goods Rec.	QUANTITY	REMARKS

I hereby certify that the material or services have been received, inspected and found satisfactory for the purpose for which they were purchased.

_____ Inspector.

Order No.

Certify and date and return this form to Purchasing Agent only when order is completed. Otherwise hold for balance and report partial delivery on proper form.

FIG. 54. INSPECTION REPORT, DAYTON, OHIO (8½"×11")

it places too much reliance on one person's judgment. Obviously, the volume of deliveries is too great for inspection by the purchasing agent, except in the smallest governments. The Philadelphia purchasing department has a special division with a staff of inspectors. A chief inspector and four assistants are employed by

Form 5 10M

AUDITOR'S RECORD WITH INSPECTOR'S REPORT
PURCHASING DEPARTMENT, CITY OF CINCINNATI

C

Messrs. _____ *Date* _____

Will furnish and deliver the following directly to

_____ *Req. No.* _____

_____

For account of _____ *Fund.* *Dept. No.* _____

TO INSPECTOR:
Shipping Tag or Delivery Memo. must bear Number of this Order. Check Goods Received or Services Rendered with this Order, and when entire Order is filled, sign certificate at bottom, as to Quantity, Quality, and Condition, and return Order at once to Purchasing Office.
This Memorandum is to be forwarded by the Purchasing Office with Invoice and Voucher to the Auditor.

QUANTITY	UNIT	DESCRIPTION	PRICE PER UNIT	ESTIMATED AMOUNT	EXCEPTIONS

I HEREBY CERTIFY upon my own personal knowledge, that this order is authorized by properly executed and approved requisition on file in this office, to which is attached a certificate that the articles or services are necessary.

_____
Purchasing Agent.

I hereby certify that the cost of the above work or supplies is fully covered by unincumbered balances in the above funds, and that the expenditure therefor has been duly authorized and appropriated.

_____
City Auditor.

I hereby certify that the articles or services above specified have been received in good condition or services properly performed, and that the quantity and quality thereof have been verified with the exceptions noted on the margin.

_____
Inspector.

To be Signed by Inspector by whom Goods were Inspected and Returned at once to Purchasing Office.

FIG. 55. INSPECTION REPORT, CINCINNATI, OHIO (8½"×11")

the purchasing department in Detroit. Cincinnati has two inspectors, but, as pointed out below, the inspection of several commodities used by the city is made by outside agencies.

The report of the inspector in Detroit (Figure 53) is sent to the purchasing department where the inspection date and the inspector's name are entered on the office copy of the order (See Figure 39). The inspector in Dayton certifies on Figure 54 not

Form 15

INSPECTORS DAILY REPORT

PURCHASING DEPARTMENT, CITY OF CINCINNATI Date_____191__

CAR TICKETS USED_____

The following material on orders mentioned below, has this day been inspected by me, and my report on same is given below in detail.

Orders on which inspection is complete, also orders for final disposition by inspector in chief are hereto attached.

(Signed)

_____Inspector.

Date of Order	Order No.	Requisition No.	Department	Supplies or Material Inspected	Vendor	REMARKS

FIG. 56. INSPECTOR'S DAILY REPORT, CINCINNATI, OHIO (14"×8½")

only "that the materials or services have been received" and inspected, but also that they have been "found satisfactory for the purpose for which they were purchased." The form illustrated by Figure 54 is sent to the purchasing agent only when delivery is completed. Partial delivery is reported to the purchasing office on a special form and Figure 54 is retained by the inspector until delivery is completed.

In Detroit and Dayton the inspector's reports are retained by the purchasing department. In Cincinnati the report (Figure 55) is forwarded by the inspector to the purchasing office and from there is sent to the auditor with the invoice and voucher for payment. The Cincinnati inspector submits a daily report of his work (Figure 56) to the purchasing agent.

3. By the Finance Department.—In Pittsburgh and New York City, all commodities and services received by the city are inspected by the finance department, which provides an independent and impartial check.

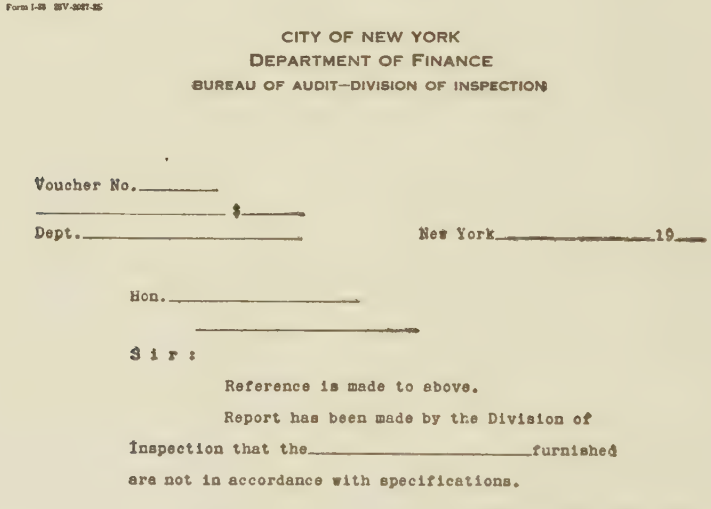
New York City's inspection system, in some respects the most comprehensive in the country, is in charge of the inspection division of the bureau of audit of the finance department. This division receives a copy of every order issued by the department of purchase and by all other buying agencies of the city, and a copy of the invoice from the supplier as soon as he has made delivery. Inspection is usually made on the day following receipt of invoice, and all commodities are inspected as and where delivered. No delivery can legally be put to use until it has been inspected and accepted by a representative of the finance department.

As elsewhere, the inspectors in New York City determine whether the quality and quantity delivered conform to the quality and quantity purchased. On informal or open market orders under $1,000 in amount, the *price* is also subject to inspection and to review by the audit division of the finance department, as explained in full in Chapter XI.[1] On formal or "contract" orders, adequate competition is presumed to have been secured and satisfactory price obtained, through advertisement and receipt of

[1] See pp. 296, 297.

sealed bids and through the presence of a representative of the finance department at the opening of bids and award of contract.

The division also inspects personal service, such as bands hired by the city for park concerts, parades, etc., to determine whether the number of musicians hired by the city actually was furnished. Forty-five full-time inspectors are employed by the finance department. A specialist on paper and stationery is assigned to the storeroom of the board of city record, referred to above, to check all deliveries. The inspection division has other specialists on



Form I-58 [illegible]

CITY OF NEW YORK
DEPARTMENT OF FINANCE
BUREAU OF AUDIT—DIVISION OF INSPECTION

Voucher No._____
_____ $_____
Dept._____ New York_____19___

Hon._____
_____

Sir:

Reference is made to above.

Report has been made by the Division of Inspection that the_____furnished are not in accordance with specifications.

FIG. 57. REPORT ON REJECTION OF DELIVERY, NEW YORK CITY ($8\frac{1}{2}'' \times 11''$)

lumber, meats, forage, and foodstuffs who inspect deliveries of such commodities anywhere in the city. The rank and file of the staff, however, are assigned to prescribed geographical zones within which they are responsible for inspecting deliveries of all commodities to all using agencies. The inspectors are rotated and assigned to different zones at frequent periods.

The present inspection staff of the finance department is inadequate for its colossal task. There are over 2,000 different places in the city at which deliveries are made, and the number

of deliveries total approximately 500,000 per year. The inspectors are able to visit some of the outlying receiving points only at infrequent intervals; consequently, many deliveries are put to use without inspection, although no commodity received by the city can *legally* be used until it has received the inspection and approval of the finance department. The inspection staff should be augmented or the inspection system should be changed, so that full and complete inspection can be made of all *matériel* to prevent loss to the city through unsatisfactory delivery by unscrupulous suppliers.

If the delivery is found deficient in quantity or quality, the inspector recommends its rejection and explains the reasons therefor in his report on the inspection copy of the order. A report recommending rejection (Figure 57), signed by a deputy comptroller, is then sent to the head of the receiving department, with copy to the vendor. This recommendation is tantamount to actual rejection, because the bureau of audit of the finance department refuses payment on any claim for rejected goods.

4. By Outside Inspecting Agencies.—Various outside agencies are prepared to inspect certain commodities for any government at cost or for a reasonable fee. The bureau of agricultural economics of the United States Department of Agriculture, with a staff of skilled inspectors in various cities, will regularly inspect eggs, meats, and various foodstuffs at a reasonable rate for any state or local government. The Baltimore Chamber of Commerce inspects all flour used by the Maryland state institutions. The flour is inspected in the warehouse of the supplier before shipment. Each barrel and bag is compared with the sample of flour upon which the order was based and, if satisfactory, is stenciled with the inspector's initials. For this service, the state of Maryland pays 1½ cents for each barrel or bag inspected. This method eliminates disputes, for the ability and fairness of the inspector are recognized by all parties. The Baltimore Chamber of Commerce offers a similar service for the inspection of hay, grain, clover seed, and all kinds of forage. In Cincinnati, eggs are inspected by the Chamber of Commerce, and hay and grain are in-

spected and weighed by the Cincinnati Hay and Grain Exchange. The cost of such inspection is paid by the supplier. Private inspecting agencies are also employed by the city and county of San Francisco. Beans are inspected by the Chamber of Commerce; butter and eggs, by the San Francisco Wholesale Dairy Producers' Exchange; and coffee, by recognized coffee experts. Such inspecting services are available in many places and should not be overlooked by any government in a position to make use of them.

Rejection of Deliveries.—When a delivery is rejected as unsatisfactory, the supplier is notified by the inspecting office. The supplier must then remove the rejected goods at his own expense or open negotiations with the government for acceptance of the goods at a lower price. Many contracts and some orders clearly define the procedure to be followed in cases of rejected deliveries. As pointed out in Chapter VIII, some governments reserve the right to buy in the open market a substitute for the rejected commodities, charging the supplier with the price difference, if any. This can easily be accomplished if the supplier has given a surety bond or cash deposit with the contract. Otherwise the penalty may be deducted from any outstanding claim of the supplier against the government for previous deliveries, or taken to court to secure judgment.

If the vendor resorts to litigation to compel acceptance of delivery or to collect a disputed claim, the government's case is presented in court by the head of the legal department or his representative. The purchasing agent, inspector, and chemist are invariably called upon to testify to their knowledge and records of the transaction. In some cases, governments have successfully invoked arbitration as a means for settling controversies with suppliers over rejection of deliveries and shortage or damages in transit.

Testing

Chemical and physical tests are essential to an efficient inspection system. The most skillful inspector often cannot determine the niceties of quality without the assistance of a testing labora-

tory. The mere counting and weighing of many commodities is a farcical inspection, unless supplemented by chemical or physical tests. Materials entering into the construction of a street or highway are now universally subjected to quality and performance tests.

Machines have been devised, for example, for testing the durability of concrete, the organic composition of sand, the ductility of asphalt, and the viscosity of oil, which are criteria of their desirability for government use. The testing laboratory of Allegheny County, Pennsylvania, has a machine for ascertaining the relative proportions of sand, crushed stone, and asphalt, in an asphalt pavement after it is laid and ready for use. In connection with the standardization of lubricating oils in Milwaukee, the city purchasing agent made an exhaustive search for a machine to test lubricating values of motor oils under actual working conditions, but found that none was available. A machine was then devised through the joint efforts of the city paving chemist, the mechanical engineer of the department of public works, and the city purchasing agent, which measures friction through current consumption with load; viscosity through current consumption without load; friction through rise in temperature of oil; and breaking-down point of oil at high temperatures.[2] Many other devices for ferreting out real values in commodities have been devised by the Bureau of Standards and other testing laboratories in response to definite needs.

In addition to determining the performance value of deliveries, scientific tests help to eliminate the guesswork of comparing samples submitted with bids. As pointed out in Chapter V, facilities for making tests are indispensable to the work of formulating standard specifications, for without tests it is difficult if not impossible to decide upon the most suitable quality for the required use. A testing laboratory may also be of great value in supplying expert testimony in litigation with dissatisfied vendors seeking to enforce payment for unsatisfactory deliveries.

[2] See "A Practical Test for Motor Oils," by Joseph W. Nicholson, *The Purchasing Agent,* July, 1928, pp. 783, 784.

Extent of Testing by Governments.—A few governments have made noteworthy progress in scientific testing.

1. The United States Government.—The federal government stands second to none in its appreciation of the value of scientific testing. The Bureau of Standards is recognized as the greatest standardizing and testing laboratory in existence.[3] Samples submitted with bids and samples of deliveries are tested for all departments and establishments of the federal government and for the municipal government of the District of Columbia. Many tests are also made for state and local governments at cost or for nominal fees. During the fiscal year ending June 30, 1927, the bureau made 76,036 tests for the federal government and for state and local governments, and 64,174 tests for private individuals and organizations.

The Bureau of Standards has conducted tests in innumerable commodities to determine which of several competitive brands is the most suitable for government use. Such tests will be made for any state or local government upon request. If a public purchasing agent wishes to know, for example, what brand of typewriter or automobile tire has the best performance qualities, the detailed results of scientific tests can be secured by sending samples to the Bureau of Standards.

The operating budget of the Bureau of Standards is about $2,000,000 per year. From this sum the bureau bears without reimbursement the cost of all tests made for local governments and for the public, for testing fees are turned into the general fund of the United States Treasury. Branch laboratories are maintained at Denver, at San Francisco, and at Northampton, Pennsylvania, which test miscellaneous commodities, chiefly cement and construction items. But the main function of the Bureau of Standards is research, rather than testing.

On account of limited funds, the Bureau of Standards is unable to meet all the requests for tests received from local govern-

[3] The work of the Bureau of Standards in standardizing specifications, and in promoting the more widespread use of specifications by governments, has been discussed above in Chapter V.

ments and from the public. Such requests are directed wherever possible to reputable commercial testing laboratories. As a step in its program to facilitate the use of specifications, the bureau has compiled a directory of commercial testing and college research laboratories which are willing to make tests for state and local governments either on the basis of an established fee or at actual cost.[4] This information, it is hoped, will bring the colleges and the state, county, and municipal governments closer together to their mutual advantage, and will encourage in purchasing the use of more accurate commodity specifications.

The bureau of mines of the United States Department of Commerce is the greatest research and testing laboratory in the country for the determination of quality in coal. Although established primarily to serve the federal government, the bureau of mines places its facilities at the disposal of state and local governments free of charge or on a fee basis. The extent and the value of such service to New York state during 1926 are shown by the following quotation from the annual report of the state purchasing agent:

It is, therefore, apparent that the offer of the bureau of mines to send a representative to this department at any time to confer in regard to matters of coal supply; to make available to this department at all times the results of tests and inspections already made by the bureau of mines; to place at the disposal of this department for a limited period, in spite of their own need of his services, a trained mine inspector; and the actual analyses by the laboratories of the bureau of mines of over 1,200 samples of coal taken from deliveries to the different institutions, has enabled this department to make and enforce intelligently its coal contracts.

The engineer in charge of fuel inspection at the bureau of mines personally spent several days in this department weeding out variations in analyses, which would indicate defects in sampling of coal, and through his recommendations obtained the mine inspection

[4] *Directory of Commercial Testing and College Research Laboratories, Bureau of Standards Miscellaneous Publication No. 90;* second edition, 1927. Sold by Superintendent of Documents, Government Printing Office, at 15 cents per copy. A *Supplement* (5 cents per copy) was issued in January, 1929.

and taking of seam samples at 14 mines from which large quantities of coal were being shipped on state contracts.[5]

2. State and Local Governments.—The importance of scientific testing has not been recognized very widely by state and local governments. Considerable advance has, it is true, been made in the past decade, but most governments still lack facilities to prosecute a systematic testing system. Consequently, many public purchases are still made on the basis of the appearances of samples submitted with bids, with rule-of-thumb inspection of deliveries.

The purchasing agents of five of the states, four of the Canadian provinces, and seventy-nine of the cities included in this study are authorized to have tests made by the laboratory of another government or by a private concern.

In nineteen states, the laboratories of other departments are used to some extent by the central purchasing office. Almost every state maintains a laboratory in connection with its highway department, and in some cases the services of this laboratory are made available to the purchasing agent for testing samples. In some cases the laboratory is in the health department or in the office of the state chemist, which is generally equipped to make only chemical tests of subsistence commodities. Five states use the laboratories of the state university. Comparable arrangements are effective in Akron, Cincinnati, and elsewhere between the city government and the municipal university, or between the purchasing office and the laboratory of some other city department.

Massachusetts and New York have testing laboratories under supervision of the state purchasing agencies. In New York state the laboratory renders material assistance in the establishment of standard specifications as well as in the samples submitted with bids and samples of deliveries. When centralized purchasing became effective in Massachusetts at the beginning of 1923, the testing laboratory of the department of mental diseases was consolidated with the pure food and drug laboratory of the depart-

[5] *Fourth Annual Report of the Superintendent of the Department of Purchase, State of New York; Legislative Document (1927) No. 95,* p. 16.

No. 19499

BOARD OF PURCHASE

DIVISION OF INSPECTION

Date.....

To Chemist in Charge, Board of Purchase Central Testing Laboratory

Sample No.....is herewith presented for analysis to determine:

Compliance with Specifications.....
Comparison with Standard Sample
Composition and Market Value

Department.....

Article.....

Manufacturer.....

Brand or trade mark.....

Vendor.....

Order—
Contract No.....

Quantity.....

Price per unit.....

Point of Delivery.....

Date of Delivery.....

Sample taken.....192.....

In presence of.....

.....

Sampler

FIG. 58. REQUEST FOR LABORATORY TEST, NEW YORK CITY ($5\frac{1}{2}'' \times 8\frac{1}{4}''$)

CITY OF NEW YORK
DEPARTMENT OF PURCHASE
MUNICIPAL BUILDING
NEW YORK
TELEPHONE 9143 WORTH

To

SIR: THE DEPARTMENT OF PURCHASE SUBMITS THE FOLLOWING REPORT ON SAMPLE
No.

VERY TRULY YOURS

COMMISSIONER.

LABORATORY REPORT SAMPLE No.

ARTICLE MANUFACTURER

BRAND OR TRADE MARK VENDOR

ORDER NO. CONTRACT NO. QUANTITY PRICE PER UNIT

POINT OF DELIVERY DATE OF DELIVERY

SAMPLE TAKEN IN PRESENCE OF SAMPLE DELIVERED BY ON

SPECIFICATION ANALYSIS COMPLETED

TESTS	FOUND	SPECIFICATION REQUIREMENT

FIG. 59. REPORT OF LABORATORY TEST, NEW YORK CITY (8½"×13")

ment of public health and was placed under the control of the purchasing bureau. In 1922 over $7,000 had been paid to private testing laboratories for analysis of state coal purchases. The total operating cost of the state testing laboratory is about $17,000 per year and the coal analyses now constitute only about 8 per cent of the total tests. Coal, paints, soap, flour, canned foodstuffs, and many other commodities are tested. In 1924 about 6 per cent of deliveries were rejected on account of inferior quality, as already

stated in Chapter V.[6] The chief chemist and his four assistants make about 3,500 tests per year.

Municipal testing laboratories are operated in several cities such as Boston, New York City, Philadelphia, San Francisco, St. Louis, and St. Paul. With the exception of New York City, these laboratories are not directly supervised by the purchasing agency.

CITY OF NEW YORK
DEPARTMENT OF PURCHASE
MUNICIPAL BUILDING
NEW YORK
TELEPHONE 9188 WORTH

....., 19..

TO

SIR: THE DEPARTMENT OF PURCHASE SUBMITS THE FOLLOWING REPORT ON COAL SAMPLE NO. .....

VERY TRULY YOURS,

COMMISSIONER

Sample No.....

Kind and Size of Coal ..... Date Received .....

Contractor ..... Quantity ..... Tons

Delivered at ..... Price ..... per ton

Sample Taken at ..... Barge / Car / Yard } Name or No. .....

Specification ..... Analysis Completed .....

Remarks: Laboratory sample prepared from a gross sample of about ..... pounds

taken by .....

Order No. .....

LABORATORY REPORT

Analysis

	Through Large Mesh Screen	Over Small Mesh Screen	B. T. U. per lb. (Dry)	Moisture as Delivered	Ash (Dry)	Volatile Matter (Dry)	Volatile Sulphur (Dry)
Specification Requirements	Minimum	Minimum	Minimum	Maximum	Maximum	Maximum	Maximum
Determined							

FIG. 60. REPORT OF COAL ANALYSIS, NEW YORK CITY (8½"×13")

[6] See p. 110.

San Francisco uses the laboratories of the city engineer and the department of health. Tests are also made by the chamber of commerce and the other outside agencies which inspect certain commodities, as described above.

The central testing laboratory of New York City was established in 1911 under the supervision of the board of estimate and apportionment, but since 1920 has been attached to the central purchasing agency.[7] The laboratory is in charge of a chief chemist, with a total staff of twenty-four. The number of tests total about 6,000 per year. The majority of tests are made at the request of the inspection division of the finance department or the inspectors of the department of purchase, but some tests of liquor and narcotics are also made for the police department. Materials for street construction and repair in the boroughs of Richmond and Bronx are tested by the central laboratory, but separate laboratories for this purpose are operated by the president's office in the boroughs of Manhattan, Brooklyn, and Queens.

A request for test is submitted on the form illustrated by Figure 58, accompanied by a sample, and indicating whether test is to determine compliance with specifications, comparison with standard sample on which the order was awarded, or the composition and market value of the delivery. The report of the test (Figure 59) is made out in at least five copies: one is sent to the inspection division of the finance department; another is sent to the purchasing office; two copies go to the department which received the delivery, by which one copy is forwarded to the vendor; and a fifth copy is retained by the laboratory. A special form (Figure 60) is used for reporting the chemical analysis of coal samples.

Samples submitted with bids are seldom tested. The laboratory is "central" in name only, for several departments, in addition to the borough presidents' offices in Manhattan, Brooklyn, and Queens, maintain their own laboratories. It would undoubtedly be a measure of economy for New York City to centralize its testing laboratories and to make greater use of its testing facilities.

[7] The work of the laboratory in connection with standarization has been discussed above in Chapter V, pp. 106, 107.

CHAPTER X

STORAGE AND STOCK CONTROL

Stock on hand awaiting consumption ties up public funds. It is an asset which for financing purposes is equivalent to cash. The success or failure of a purchasing system often hinges on the care or the laxity with which stock on hand is accounted for and controlled. All the savings of careful and exact purchasing may easily be dissipated through extravagance in requisitioning larger quantities than needed and through duplication of stocks in the stores of the separate and individual using branches resulting in an unnecessarily high investment. Careful custody of stock between time of delivery and time of use therefore has an exceedingly important bearing upon the total supply cost.

Governments, generally speaking, buy *matériel* for consumption and not for manufacture or resale, and are thus spared the necessity of planning a future schedule of manufacture and of prophesying future sales. Certain exceptions are found in those cities and states which buy raw materials for manufacturing use in institutions and in certain agencies of the federal government which manufacture a regular line of products, such as the bureau of printing and engraving. The storeroom of a private corporation is often the repository for finished products pending their distribution and sale. In governments this would apply only to the products of state correctional and penal institutions whose products are generally handled and sold by the producing institution or by some central agency other than the purchasing office.[1] For these reasons the average government has less need for storage facilities than a private corporation. As already shown, some

[1] A few state purchasing agents are responsible for selling these products, as noted in Chapter VII, p. 180.

governments partially dispense with the storage of certain leading supply items by a form of contract in which the vendor holds the purchased goods in his own stores until requisitioned for delivery by the purchasing agent or by the using agencies.[2]

No government, however, entirely escapes the need for maintaining some stocks on hand. If a central storage system is lacking, small stockrooms are maintained by some of the using departments for the storage of stationery or other staple items, and sometimes one or more of the larger using branches have individual storerooms or storage yards.

Economic Factors Involved.—The question whether *matériel* should be stored or delivered directly as needed should be decided economically and for each commodity separately. The following factors are to be weighed in arriving at a decision:

1. Market Facilities.—If the whole government or any using agency is situated in a production center within easy access of desirable markets, delivery of some commodities direct from producer or dealer to the individual using agency may be more economical than storing in advance of need. If, on the other hand, the government or its using branch is removed from the point of production, so that long shipments are involved in delivery, the transportation charges and the dangers of shortage resulting from extraordinary demands or market conditions may be materially lessened by bulk shipments for storage.

2. Probable Overhead Cost of Storage.—The ultimate cost of an article delivered direct from the vendor to the user consists only in the purchase cost, or the cost at point of shipment plus transportation charges to point of use. An article delivered for use from storage involves many other cost factors. To the selling price plus transportation must be added the cost of handling the goods at least twice—when put in storage and when issued; clerical and labor cost of stores accounting; rent or interest on storeroom building and equipment; interest on stock investment for storage period; and depreciation of goods through obsolescence. A brief storage experience will give an overhead index per dollar

[2] See Chapter VIII, pp. 195-198.

of storage inventory. This index, proportioned to the probable storage period, should be added to the purchase cost to determine whether the article should or should not be stored. Only by such computation can the purchasing official decide whether a "bargain" purchase is real or imaginary.

Those responsible for the purchase and storage system should classify the commodities used to determine those to be delivered as needed and those to be stored in advance of need.[3] Such classification should be frequently revised in accordance with changing market conditions. The same article, which on a falling price level should be purchased for direct delivery, should, in a period of rising prices or danger of shortage, be stored in quantity. Generally speaking, a low stock inventory on a falling price trend and a high inventory on a rising price trend may be taken as criteria of a sound purchasing and storage plan.

Methods of Storage and Stock Control

The custody and control of stock, as a part of the purchasing system, may be exercised in four ways: by centralized control, with decentralized storage; by central storage; by interdepartmental transfer; and by sale of obsolete or unusable stock.

Centralized Control with Decentralized Storage.—Even though the storage of surplus stocks is in the hands of the individual departments and institutions, it is important to a sound procurement system to have centralized control over *matériel* on hand. The individual storerooms should be required to submit to the purchasing office periodic inventories of the stocks on hand, and to supplement the inventories with periodic reports on the receipts and issues of stock since the preceding inventory. Such a plan has obvious advantages. In the first place, it discourages waste through carelessness in issue of stock from the storeroom.

[3] This classification is to be distinguished from the classification followed in accounting control, standardization or other procedure, as discussed on pp. 89, 104, 127, 133, and 284. The storage classification should be specific rather than generic, since one item may be stored while another in the same class may be purchased only as needed.

Besides, it gives the purchasing official reliable data upon which to premise his buying schedule. When prices are high, he knows how long he can operate on a "hand-to-mouth" basis before the supply will be exhausted; and when prices are low, he knows how large his orders should be to meet requirements for a certain future period. Most important of all, it gives him an index to the consumption trend of each using agency, and thereby enables him to determine whether the estimates of future requirements as submitted are for reasonable quantities. When stores are decentralized, periodic stock reports are an essential adjunct to the maintenance of a purchase and stock record system (See Figure 40).

If the budget is administered on the allotment basis, periodic stock reports also provide the budget officials with information to show whether the individual using agencies are exceeding, or keeping within, their allotments for the period.

In several states, certain departments have authority to install and to audit uniform accounts of personal property on hand in the state departments and institutions. In New Jersey such state control is exercised over municipalities through the department of municipal accounts. In Minnesota and Massachusetts the commission on administration and finance installs and periodically examines a uniform system of accounting in the state branches and receives periodic stock reports which are available to the purchasing branch of the commission. A similar arrangement exists in other states, like Tennessee, where the purchasing office is a division of the state finance department. The purchasing agent of New York state installs uniform accounting systems in the state institutions and receives from them periodic reports which are carefully checked to determine the consumption trend in different periods of the year as the basis for the purchasing schedule. In Montana all "persons in charge of any state property, must, upon request of the state purchasing agent, furnish him with a sworn statement of all personal property in his possession or under his charge belonging to the state of Montana, together with an estimate of the value thereof, and must also furnish him with such other information in connection therewith, as the state purchasing

agent shall require." State officials are also required to "tabulate in detail the amount of supplies on hand at the beginning of each quarter, and the additional supplies needed for the ensuing quarter," and to submit such information to the state purchasing agent. The purchasing agent is also authorized to visit and to inspect the warehouses of state using agencies at any time.[4] The Alabama state purchasing office also receives annual inventories from all state using agencies.

The county of Los Angeles, California, has seven separate storerooms which are under the supervision of the stores division of the purchasing office (See Figure 1) and render periodic stock reports to the central office.

Central Storage.—By the plan of central storage, one or more central storerooms are maintained by the government, and are directly operated by the purchasing or storing official rather than by the individual using departments.

1. Arguments for and against Central Storage.—The chief arguments *in favor of* a central storage system may be summarized as follows:

(*a*) *It reduces the total storage overhead cost.*—Wherever a central storeroom supplants several departmental storerooms, it generally makes possible a reduction in the total storage space and in the personnel engaged in storekeeping. The report on the stores situation in Baltimore by a subcommittee of the commission on efficiency and economy in 1925 estimated that over $50,000 could be saved annually in the personnel cost by the establishment of a central stores system.[5]

(*b*) *It provides a central delivery point.*—This tends to lower prices, since it reduces the total delivery cost. A central delivery point also reduces the cost of inspection.

(*c*) *It reduces total stock investment.*—The stock of each item kept in a central storeroom is likely to be smaller than the

[4] Laws of 1923, chapter 66.

[5] *Report of Committee on the Proposed Bureau of Stores* to Commission on Efficiency and Economy, pp. 17, 18.

total stocks in several scattered departmental storerooms. Thus the total stock inventory may be kept at a lower figure.

(*d*) *It provides storage space for bulk purchases.*—If the purchasing official has storage space to accommodate bulk delivery and has a revolving fund to finance it, he is enabled to order in advance of need when market conditions are favorable. Purchasing in bulk tends to lower the unit prices. It also leads to a reduction in the number of orders issued, the cost of which, as shown in Chapter VIII, is a considerable item of expense.[6] In some cases the budget system prevents expenditures for *matériel* beyond an allotment period; but with storage facilities and with a revolving fund to finance large purchases, the requirements for an entire fiscal year or longer can be bought and stored until needed, without encumbering the appropriations of the using agencies.

(*e*) *It facilitates immediate delivery of commodities as needed.*—A considerable delay often ensues between the receipt of a requisition and the delivery, if a special purchase must be negotiated. But when staple commodities are kept in storage, using agencies can secure them immediately, or within a few hours after submitting a requisition to the purchasing agent or to the storekeeper.

The main arguments *against* the operation of a central storage system are:

(*a*) *Articles may be stored which should be ordered and delivered as needed.*—The requirements of government may change with changes in administrative methods. Large stocks on hand may therefore become obsolescent or unusable and result in considerable loss. The overhead cost of storage may make the issue cost higher than the prevailing market price, especially with commodities subject to rapid price fluctuations.

(*b*) *It may encourage the purchase of larger quantities than needed.*—In many cases public purchasing agents, provided with funds to do so, have purchased large quantities of "distressed" goods which they thought were bargains, but which remained unused in storage for long periods and sometimes were

[6] See pp. 222, 223.

later sold as "junk" at great loss to the government. Such occurrences should be prevented by proper legal and accounting control and by the strict definition of the uses of the stores fund in the law which establishes it.

2. Present Extent of Central Storage.—Central storage systems are found in only a small proportion of the governments which have centralized purchasing.

(*a*) *In states.*—Central storage has met with little favor in state governments. The reason is obvious. In most states the various institutions are widely scattered, so that distribution cannot be made from any one central point without very high delivery cost. But at the present time nine states have established central storage systems. The state of California, for example, maintains two stockrooms for stationery and miscellaneous supply items at Sacramento and Los Angeles, to serve the northern and southern parts of the state, respectively. A large central warehouse is also maintained in the Ferry Building in San Francisco, where many of the staple items of supply required by the state are stored in bulk. Maryland has established a central warehouse at Baltimore, from which the majority of the state using agencies are supplied at a minimum of transportation cost. Ohio operates a central warehouse at Columbus in connection with the state penitentiary, where prison labor is utilized to keep the overhead operating cost at a very low figure. Providence, Rhode Island, like Baltimore, is admirably situated as a supplying center, for all the state using branches are located within trucking distance of that city. The state purchasing office of New Jersey maintains two warehouses for supplying state institutions and departments. Stationery storerooms are maintained in the state capitols of Massachusetts, New Hampshire, Nebraska, Pennsylvania, Utah, and Wyoming. In all other states stockrooms are also maintained at the individual institutions.

(*b*) *In counties.*—Although geographically well situated in most cases for centralized storage, very few counties have adopted this plan of central storage control. Storerooms for stationery and miscellaneous supply items are maintained by the purchasing

agents in Alameda, Monterey, and Santa Cruz counties, California; Wayne County, Michigan; Erie County, New York; and Spokane County, Washington. In addition, Alameda County, California, has a central warehouse in connection with the county hospital, where several staple commodities are stored in bulk for distribution to the county agencies within trucking radius. Wayne County, Michigan, maintains a central cold storage and refrigerating plant from which meats, vegetables, and other perishable food stuffs are distributed. A most elaborate and complete storage system is maintained by Los Angeles County, California, where, as already noted, one of the assistant purchasing agents heads a stores division and supervises the seven county storerooms.

(*c*) *In cities.*—Systems of central storage are now maintained in thirty-six cities. In some of these, for example, Oakland, California; Flint, Michigan; and Waltham, Massachusetts, only the small stationery storeroom in the purchasing agent's office is under central control.

It is increasingly the practice to install a gasoline filling and automobile service station in connection with the municipal storehouse. Such stations in Dayton and Milwaukee facilitate the purchase of gasoline and lubricating oil in tank-car lots at greatly reduced prices.[7]

Baltimore in 1925 was operating twenty-five separate storerooms and yards. The subcommittee on stores, referred to above, recommended that these be supplanted by one central storeroom and yard, and six substores, to be under supervision of a bureau of stores of the public works department. This change, it was estimated, would reduce the city's investment in real estate and equipment to the extent of $200,000; would reduce labor costs by $50,000 per year, as stated above; would reduce the cost of hauling by outside contractors by $25,000 per year; and would save $25,000 per year through quantity purchase of staple articles. The overhead cost of storage in Baltimore in 1925 was $92.41 per $1,000 of stock. The report estimated that storage cost could be reduced to $35.81 per $1,000 under the central stores plan,

[7] The savings in Dayton through this plan are noted in Chapter I, p. 14.

which would compare favorably with the storage costs of private corporations of the city.

3. Administration of Central Storage Systems.—All states and counties, and most cities which have central storerooms, vest responsibility for their control in the purchasing official. In Massachusetts, such responsibility is shared by the members of the commission on administration and finance. In the smaller cities, the storeroom is directly in charge of the city manager or purchasing agent. In most of the larger cities, a storekeeper, acting under direction of the purchasing agent, has charge of the storeroom. In twenty-eight cities, a storekeeper is in charge, but is responsible to the city manager or purchasing agent. Fourteen cities under the mayor-council or commission form of government place the storeroom under the purchasing agent; eight put it under the direction of the storekeeper. Some Canadian cities, as noted in Chapter III, combine purchasing and storing under authority of a storekeeper.[8] Examples of such plan may be found in Calgary, Edmonton, and Lethbridge, Alberta.

Whether the storeroom is independent of, or under the supervision of, the purchasing office, the storekeeper and the purchasing agent must work closely together to achieve satisfactory results.

4. Methods of Financing Storerooms.—Storerooms are generally financed by a revolving stores fund, which is charged when purchases are made, and is reimbursed when stock is issued. The control of such fund, and the settlement of the transactions in connection with it, are practically without exception the function of the finance department or corresponding governmental agency.

The total stock inventory is limited to the amount of the stores fund unless some departments are willing to store *matériel* for their future use and to carry the cost thereof on their own budget during the storage period. In some cases, separate funds are maintained for each leading commodity group carried in stock. Thus Ohio has three revolving stores funds: one for institutional food supplies, another for office supplies, and a third for printing.

[8] See p. 59.

The New Jersey stores fund is $350,000, and the Maryland fund is $100,000. Dayton, Ohio, and Lethbridge, Alberta, maintain revolving funds for stores to the amount of $10,000; Washington, D.C., $50,000; Milwaukee, $25,000. In addition, Milwaukee has a revolving fund of $10,000 for the municipal filling station.

Where storage responsibility is decentralized, a fund is sometimes maintained for each separate storeroom. Thus the state of Indiana has a revolving fund for the use of the state purchasing office, and separate funds for each of the state institutional storerooms.

In Dayton, an average of 500 different items are regularly carried in stock, and the revolving fund of $10,000 has an average turnover of five times per year.

The overhead cost of operating storerooms is financed either by separate budget appropriations or by a charge added to each item issued from stores.[9] The latter method seems the more exact for cost accounting purposes, but it complicates stores accounting and thereby slightly increases storage cost. If storage cost is defrayed from the general fund, the cost is not borne by each department in proportion to its use of the storeroom. If, under the latter method, the cost of goods issued is higher than the current price for delivery direct from vendor, the using agency will be likely to protest and thus provide a check on the wisdom of the storage policy.

A flat rate of 5 per cent of the purchase price is added to all issues from the storeroom in Dayton, Ohio, and 10 per cent in New London, Connecticut, to defray storage cost. The 10 per cent charge in New London more than pays the operating cost of the storeroom, and leaves a slight surplus to increase the amount of the revolving fund.

5. Storekeeping Methods.—Storekeeping is a technical and complex procedure. It is impossible to discuss within the compass of this chapter other than those essentials of a storekeeping system

[9] This latter plan was followed for several years by Norfolk, Virginia, as the method for defraying the operating cost of both purchasing and storing. See the writer's article entitled "Cost Plus," *City Manager Magazine*, September, 1923, pp. 15-17.

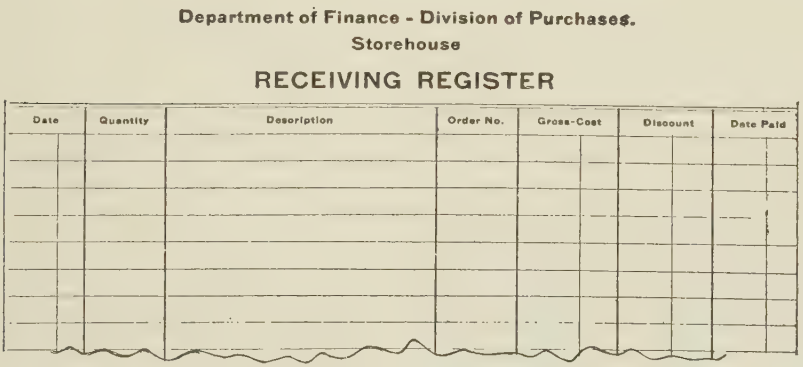
which are interrelated with the purchasing procedure. In general, storekeeping involves the following main functions:

(a) Accounting for all goods received from vendor on purchase order or returned from the using departments;
(b) Storing of commodities until issued;
(c) Maintaining adequate stock on hand;
(d) Issuing stock;
(e) Accounting for the stores fund; and
(f) Periodic inventories to verify amounts on hand.

These are discussed seriatim below.

(*a*) *Receipts.*—Some one individual should be responsible for receiving all deliveries. In a small storeroom the storekeeper may personally discharge this duty. When a storeroom is maintained in connection with the purchasing office, the purchasing agent or the city manager may personally be responsible for receipt of deliveries. In large storerooms a receiving clerk is generally employed.

Deliveries should be recorded as received, pending their inspection and rejection or acceptance. Although numerous types of forms are in use for recording deliveries, the "receiving register" of Dayton (Figure 61) will serve as illustration. This form shows


Department of Finance - Division of Purchases.
Storehouse

RECEIVING REGISTER

Date	Quantity	Description	Order No.	Gross Cost	Discount	Date Paid

FIG. 61. RECEIVING REGISTER, DAYTON, OHIO (8½"×11")

for each delivery the date, quantity, description, and the order number. It is well to record on such form only the deliveries received during a single day and to forward a report daily to the purchasing agent or accounting officer, to expedite the checking and payment of invoices. But if the stores copy of the order is returned to the purchasing office by the storekeeper as a delivery receipt, the receiving register may be submitted weekly or even monthly. The last three columns on Figure 61 are for the use of the finance department in billing the using departments for the goods issued and in accounting for the stores fund. In some governments the storekeeper submits a report to the purchasing office on each partial or complete delivery, or returns a copy of the purchase order indicating receipt thereon in the same way as any other receiving agency (See Figures 48, 49, 50, and 51).

No delivery should be accepted unless a copy of the purchase order is on hand at the storeroom to show that the delivery is authorized. For this reason, as already pointed out, a copy of all orders for delivery to the storeroom is sent to the storekeeper when the order is issued to the vendor (See Figure 50). The storekeeper should also be informed of any change in an order or its cancellation before the delivery date (See Figure 44).

Deliveries should be held on the storage floor pending inspection. If an inspector is assigned to the storeroom staff, little delay need ensue. But if traveling inspectors from the purchasing or finance department are not present when delivery is made, goods should not be placed in storage bins until officially accepted by the inspecting authority. If a chemical or physical test is required, goods should also be held pending report from the testing laboratory. In certain cases, the delivery may be made to the storeroom but, after inspection, the commodities may be transferred directly to the using agencies and not placed in the storage bins.

Goods returned to stores by the using agencies should also be delivered to the receiving clerk. The latter fills out a form, showing what was returned and by whom returned, a copy of which is forwarded to the finance department for crediting the accounts of the returning office with the value of such commodities. Worn-

out equipment often has a salvage value which in some systems is estimated by the receiving clerk when received and is similarly reported for credit to the proper account. The storeroom is often used also as a repository for scrap and obsolete articles pending their sale.

(*b*) *Storing of commodities.*—Since goods in storage have dollars-and-cents value, they should be as respectfully safeguarded as currency. Only authorized persons should have access to storage bins or yards. Perishable goods should be kept in cold storage or under cover to prevent deterioration. On the other hand, some articles, such as sewer pipe, brick, lumber, etc., can be stored out of doors in yards. Storage space is an important factor. The storage cost is frequently increased as a result of cramped quarters and lack of space for handling goods satisfactorily. Storage bins should be large enough to permit segregation of old and new stores. In all items subject to obsolescence, fresh stock should be held in reserve until the old stock is consumed.

(*c*) *Maintaining adequate stock.*—The policy for stock maintenance should be worked out jointly by the purchasing and stores officials, subject to revision to keep pace with changing market conditions.

The "minimum" is the lowest quantity to be kept on hand at any time and is determined by the consumption trend. The past consumption trend can easily be ascertained from the purchase and stores records (See Figures 40, 63, and 64); the future consumption trend can also be predicted if the storekeeper and the purchasing agent are kept informed of the work plans of the various departments. If appropriations are made on an allotment basis, the purchasing and stores officials can without difficulty foresee probable future needs and keep a stock on hand adequate to meet them.

The "maximum" is the largest quantity to be kept on hand at any time. It is sometimes governed by the amount of storage space available, but more often by market conditions. The amount to be ordered for stores should be based on the economic factors discussed above. As long as current market conditions do not

justify any change in the maximum quantity to be kept on hand, then the amount to be ordered at any time is the "maximum" less the amount on hand at the time of purchase.

The "order point" indicates the time for placing a new order. This may be the minimum, or it may be set at a different quantity. The order point is based on the time required to secure an additional supply and the probable consumption during this period. This point is also contingent upon whether the item is a staple one, easily obtainable from the supplier's stock on short notice, or is

Form O. S. 34.

STOCK CLERK'S MEMORANDUM TO BE ORDERED

DATE _____

MIN.	DUE	ON HAND	WANTED	DESCRIPTION	PURPOSE	SECTION & ITEM NO

SIGNED APPROVED

FIG. 62. STOCK CLERK'S MEMORANDUM TO STOREKEEPER ON COMMODITIES TO BE REQUISITIONED FROM PURCHASING AGENT, LOS ANGELES, CALIFORNIA (8½"×5½")

one requiring a longer period for delivery on account of special manufacture. For example, if the annual consumption of a given commodity is 12,000 units, if the trend of consumption is uniform, and if one month is needed to secure an additional delivery, the order point should be set at some figure over 1,000 to insure a supply on hand at all times.

When the quantity of an item in stock reaches the minimum or order point, the stock clerk or balance-of-stores clerk fills out a memorandum to the storekeeper or purchasing agent. The form used in the city of Los Angeles (Figure 62) shows the minimum, the quantity on hand, and the date when delivery is required. This

form, when approved by the storekeeper, is forwarded to the purchasing agent as a notice to issue an order. Another common method is to keep an order tag or bin ticket on each storage bin or rack. When the quantity on hand is reduced to the order point, this tag is given to the storekeeper, who then sends the purchasing agent a requisition for a new supply.

The storekeeper, and sometimes the purchasing agent also, is informed of the amounts on hand at all times by a "perpetual in-

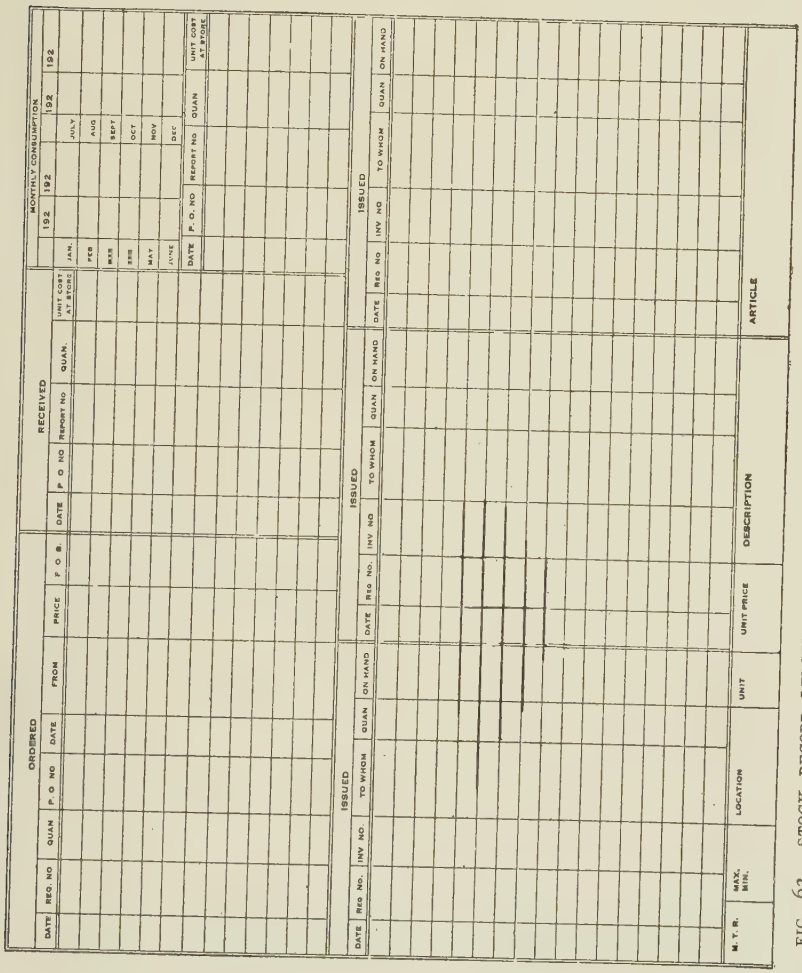
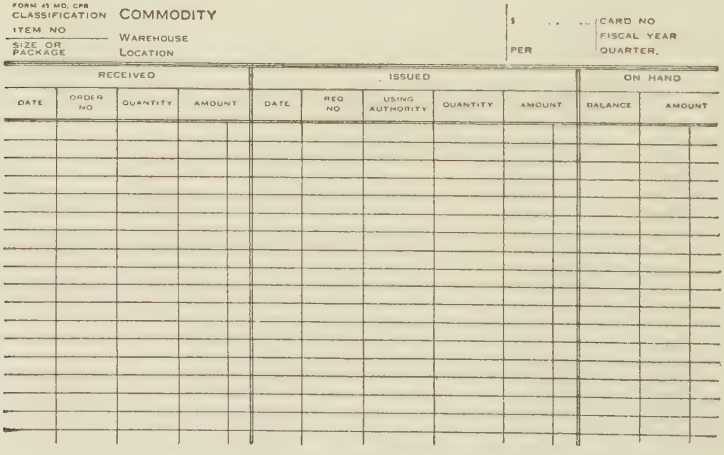


FIG. 63. STOCK RECORD LEDGER SHEET, LOS ANGELES COUNTY, CALIFORNIA (10½" × 7⅜")

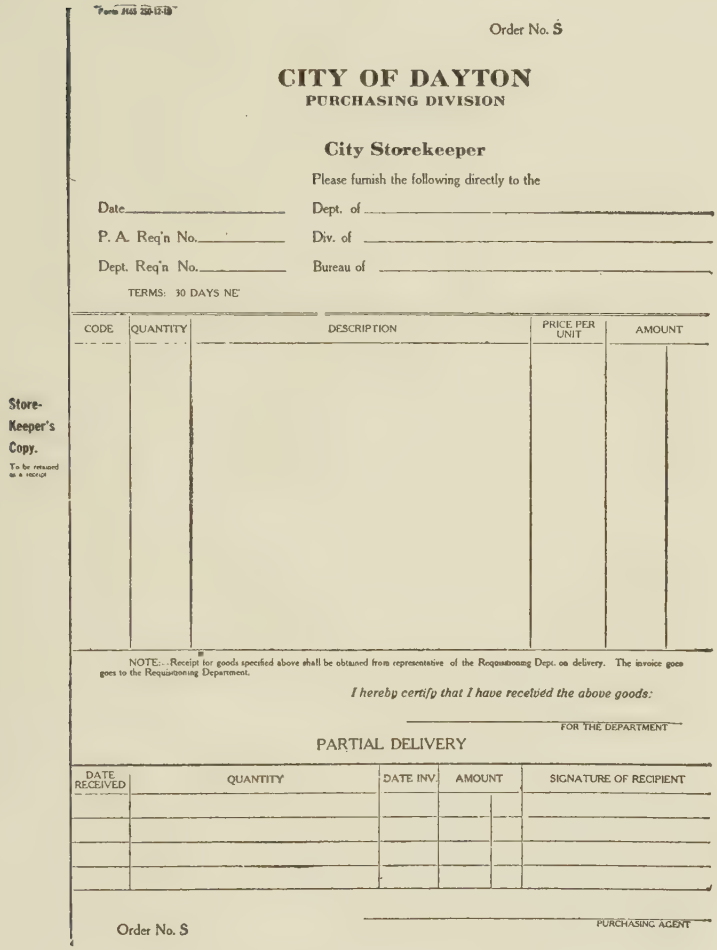
ventory" or "stock record" which is maintained by practically all government storage systems. This record, the storekeeper's ledger, is generally kept by the balance-of-stores clerk. Stock on hand plus deliveries may be said to constitute debits to the account, while issues from stock are the credits. A separate card or sheet is kept for each stock item. Each delivery, when accepted, is transferred from the delivery register to the stock record. The amount of delivery is added to the amount on hand to show present stock. Each issue from stores is also recorded on the perpetual inventory, and the amount issued is subtracted from the balance to show the stock on hand.

The stock record or perpetual inventory used by Los Angeles County (Figure 63) has several commendable features. The monthly consumption for the fiscal year is shown in the upper right-hand zone. The record of all orders and deliveries is also included. The unit cost at storeroom includes the purchase price plus transportation and handling charges. Spaces are reserved at the bottom of the sheet for the name, description, and designation of the article by class number, the minimum and maximum quantities, the unit quantity in which the item is available for issue, and the unit price. Each item is recorded on a separate sheet and all are bound in a loose-leaf ledger.


FORM 45 MD. CPB
CLASSIFICATION COMMODITY
ITEM NO
SIZE OR PACKAGE
WAREHOUSE
LOCATION
$ . . . . . CARD NO
PER
FISCAL YEAR
QUARTER.

RECEIVED				ISSUED					ON HAND	
DATE	ORDER NO	QUANTITY	AMOUNT	DATE	REQ NO	USING AUTHORITY	QUANTITY	AMOUNT	BALANCE	AMOUNT

FIG. 64. STOCK RECORD CARD, STATE OF MARYLAND (8"×5")



Order No. S

CITY OF DAYTON
PURCHASING DIVISION

City Storekeeper

Please furnish the following directly to the

Date_____ Dept. of _____

P. A. Req'n No._____ Div. of _____

Dept. Req'n No._____ Bureau of _____

TERMS: 30 DAYS NE

CODE	QUANTITY	DESCRIPTION	PRICE PER UNIT	AMOUNT

Store-Keeper's Copy.
To be returned as a receipt

NOTE.—Receipt for goods specified above shall be obtained from representative of the Requisitioning Dept. on delivery. The invoice goes goes to the Requisitioning Department.

I hereby certify that I have received the above goods:

_____
FOR THE DEPARTMENT

PARTIAL DELIVERY

DATE RECEIVED	QUANTITY	DATE INV.	AMOUNT	SIGNATURE OF RECIPIENT

Order No. S

_____
PURCHASING AGENT

FIG. 65. PURCHASING AGENT'S ORDER ON STORES, DAYTON, OHIO ($8\frac{1}{2}'' \times 11''$)

Another common form of perpetual inventory is a card file with a separate card for each stock item. The form used by the state of Maryland (Figure 64) is a 5 x 8-inch card with spaces reserved at the top for the name, class number, and description of the commodity, and the issue price. The Maryland card is designed only for a quarter of the fiscal year, whereas the stock record illustrated by Figure 63 serves for an entire year.

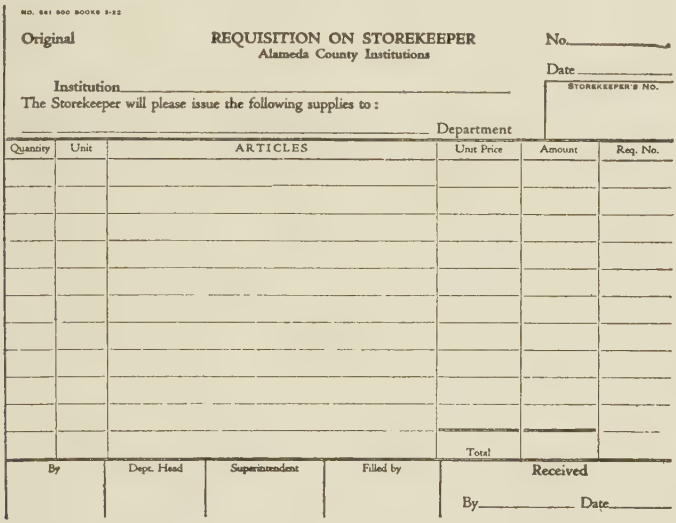
(*d*) *Issues of stock.*—The first principle of accurate storekeeping is to issue stock only to authorized persons and upon receipt of proper requisition. The storekeeper or delivery clerk should have at all times a list of, and the signatures of, the persons who are authorized to receive goods for the various departments. No one except the proper official or employee should be allowed to enter the storeroom or yards, or to remove stock, unless he presents a properly certified requisition form.

In general, two systems are followed for securing goods from stores. One of these may be illustrated by the Dayton procedure. All requisitions in that city must first be submitted to the purchasing agent for approval, except in emergencies (See Figure 14). If requisitioned goods are in stock, the purchasing agent issues an order which is given a regular number preceded by the letter "S" to distinguish it in the purchase records as a stores order. This form is made out in quadruplicate. The storekeeper's copy (Figure 65) provides for the signature of the purchasing agent at the bottom as the official authorization to issue the goods; the representative of the receiving department also signs this form as a delivery receipt. Space is also provided for noting partial deliveries. A second copy of the form is sent to the receiving department; a third to the comptroller; while the fourth remains with the purchasing agent. If requisitioned goods are out of stock, a regular order is issued for delivery to storeroom or to the using agency, or both.

By the other system, any department or using branch may requisition goods from the storekeeper without the prior authorization of the purchasing agent. To operate such a plan successfully, each using branch must be supplied with a list of the items kept in stock (the stock catalogue) so that delivery from stores can be relied upon in time of need. Otherwise the using branch must requisition through the purchasing office early enough to permit the placing of an order and to allow for the consequent delay in delivery. The requisition on the storekeeper in Alameda County, California (Figure 66), is made out in triplicate. The original is retained by the storekeeper; the duplicate is sent to the

purchasing office; the third copy remains as a record in the requisitioning office.

The handling of equipment is in many governments the source of very considerable waste. Picks, shovels, and other tools are often needlessly requisitioned and the theft of such equipment by employees has been notoriously common. To curb this practice, tools, lamps, brooms, brushes, etc., should be branded, stenciled,



NO. 561 500 BOOKS 3-22

Original

REQUISITION ON STOREKEEPER
Alameda County Institutions

No._____

Date_____

Institution_____

STOREKEEPER'S NO.

The Storekeeper will please issue the following supplies to:

_____ Department

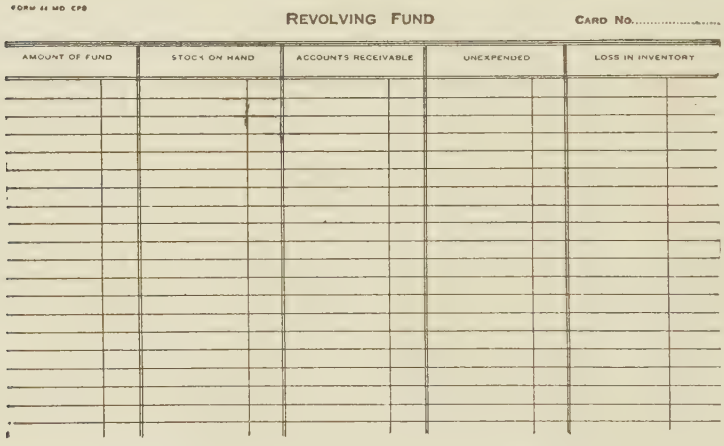
Quantity	Unit	ARTICLES	Unit Price	Amount	Req. No.
			Total		

By	Dept. Head	Superintendent	Filled by	Received
				By_____ Date_____

FIG. 66. REQUISITION ON STOREKEEPER BY USING AGENCY, ALAMEDA COUNTY, CALIFORNIA (7½"×5½")

or etched to indicate their public ownership. The state of Washington, among others, has an effective check on waste and theft by requiring that the old, worn-out piece of equipment must be returned to the storeroom with a requisition before a new one is issued. Another check on equipment is the use of a memorandum receipt to be signed by the foreman of a road or street gang, and left with the storekeeper until the equipment is returned or otherwise accounted for. This form may serve as a record of equipment during its life by providing spaces for records of transfer from one job to another.

(*e*) *Accounting for stores fund.*—In most cases accounting for the stores revolving fund is a responsibility of the finance office, as stated above. Occasionally, however, the stores or purchasing office keeps a duplicate record of such fund. Figure 67 illustrates a record of the revolving fund kept by the central purchasing bureau of the state of Maryland, which shows for each inventory period the amount of cash in the fund, the value of the stock on hand based on the issue price, the value of stock issued


FORM 44 MD CPB

REVOLVING FUND

CARD NO.....

AMOUNT OF FUND	STOCK ON HAND	ACCOUNTS RECEIVABLE	UNEXPENDED	LOSS IN INVENTORY

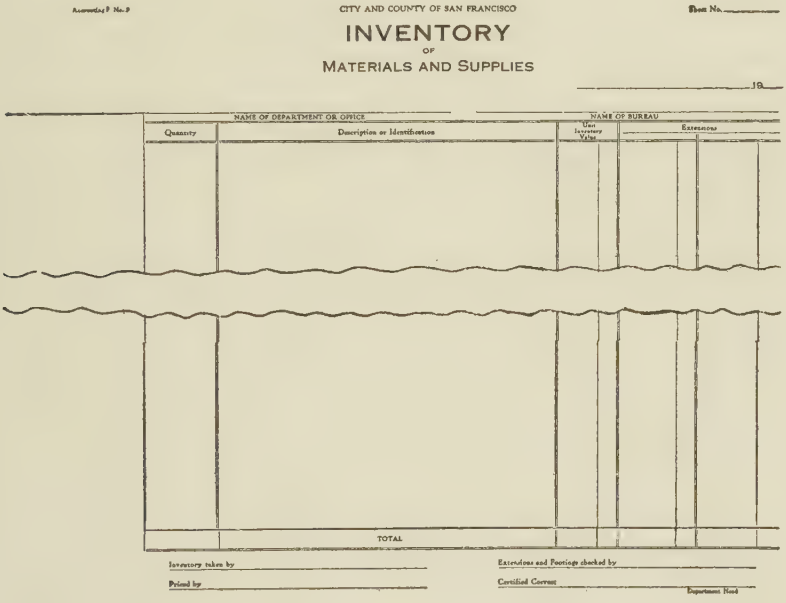
FIG. 67. RECORD OF REVOLVING FUND, STATE OF MARYLAND (8″×5″)

but not yet paid for, and the loss due to waste or obsolescence as shown by the preceding inventory. These items must at all times total $100,000, the amount of the revolving fund.

Los Angeles, however, departs from the general practice by allowing the storekeeper to maintain an accounting system separate from the finance office. Invoices are made out for each stock issue and are rendered as a bill against the receiving department. Each invoice is recorded on a sales ledger, with a separate ledger sheet for each fund from which stores accounts are payable. Spaces are provided for recording the service transfers by which funds are transferred from the operating accounts to the stores accounts. A check is made out and signed by the head of the de-

partment which receives the goods, as an accounting document which acts as a debit to the department fund and a credit to the stores fund. Most governments, however, confine the storekeeper's function to accounting for quantity, while the accounting for value is the function of the finance department.

(*f*) *Inventories.*—No matter how careful the accounting procedure may be, loss, obsolescence, and waste will unavoidably re-


CITY AND COUNTY OF SAN FRANCISCO

INVENTORY

OF

MATERIALS AND SUPPLIES

19

NAME OF DEPARTMENT OR OFFICE

NAME OF BUREAU

Quantity | Description or Identification | Unit Inventory Value | Extensions

TOTAL

Inventory taken by

Extensions and Footings checked by

Priced by

Certified Correct

Department Head

FIG. 68. REPORT OF INVENTORY, SAN FRANCISCO, CALIFORNIA (11″×14″)

duce the value of the stock on hand. Physical inventories should therefore be taken at least annually as a periodic check. The inventory should be a careful count of the stock on hand. The difference between the inventory and the stock records is charged off as a loss, as already illustrated by Figure 67, necessitating a reimbursement of the revolving fund from some other fund. This does not occur where the cost of goods issued includes an added charge for storage overhead, obsolescence, and deterioration, as in Dayton, Ohio, and New London, Connecticut.

Annual inventories should be taken, even though the storage system is decentralized, to show the total quantities on hand as a help in budget making and in planning the purchases for the ensuing year. The inventory in San Francisco (Figure 68) is submitted to the purchasing agent.

Interdepartmental Transfers.—Without centralized control over stock, one department may requisition certain commodities which are surplus and on hand in another department, and which, if not transferred and used, may deteriorate and later be sold at a loss. The central purchasing office seems the logical clearing house for surplus stock, since it is informed of the needs of all departments from the requisitions which also clear through it. The purchasing office should be given this authority whether the storage system is centralized or decentralized.

The federal government has convincingly demonstrated the possibilities for economy through interdepartmental transfers. By executive order of December 3, 1918, the General Supply Committee was made custodian of all surplus stock belonging to the United States government in the District of Columbia. All commodities declared surplus by any department were turned over to the General Supply Committee and stored either in the departmental storerooms or in the central storeroom operated for this purpose, and were there repaired for reissue or were sold. Any government department or establishment or the municipal government of the District, before ordering new stock, had to ascertain whether any surplus stock was available. If so, such stock was transferred at a price fixed by the General Supply Committee. At the close of the World War, the General Supply Committee received colossal amounts of surplus commodities. For example, over 66,000 chairs and nearly 40,000 typewriters were surplus when the war-time office staffs were demobilized. Between 1920 and 1927, over $3,000,000 worth of stock was reissued in this way by the General Supply Committee. The peak was reached in 1921 when the transfers amounted to almost $1,000,000. During the fiscal year 1925 the value of transfers was only $78,000

because the surplus stock of furniture, filing equipment, typewriters, and other leading items had then been entirely disposed of.

Since 1927 this practice has been discontinued. The General Supply Committee now distributes, to the using agencies of the federal government in the District of Columbia, lists of surplus articles, and issues new lists when there has been a substantial change in amounts on hand. Using agencies now requisition from such lists any *matériel* suitable to their requirements.

If surplus equipment had been sold to second-hand dealers at the close of the World War, the government would unquestionably have sacrificed a considerable amount. It is impossible to estimate the amount saved through interdepartmental transfers, because the prices of the same new equipment have fallen considerably below the war-time levels. The Postmaster General, in his 1923 report, estimated that his department alone, during that fiscal year, had saved approximately $86,000 by receiving surplus stock at transfer prices.

As already stated, the Government Contracts Supervision Committee of Canada has authority to fill any requisition in excess of $500 from surplus stock in the hands of any department of the Dominion government. A salvage officer supervises this work under the direction of the secretary to the committee.[10]

In ten states, the purchasing office is authorized to make interdepartmental transfers or to devise rules and regulations for such transactions between the using agencies themselves. The Iowa board of control may order one institution to buy surplus stock from another, but seldom does so. The commission on administration and finance in Massachusetts and Minnesota, and the department of finance and taxation in Tennessee, supervise such transfers. The New Jersey legislature in 1925 created a state property committee composed of the state comptroller, state purchasing agent, and a third member appointed by the comptroller.[11] This committee is authorized to survey the state departments and institutions, to become custodian for all surplus stock and equip-

[10] See Chapter II, p. 33.

[11] Chapter 151, laws of 1925.

ment found therein, and to dispose of it to the best advantage by transfer or sale.

In 1921, the first year of its operation, the Montana state purchasing agency made many transfers between departments. One department had discarded six new noiseless typewriters, which were issued to other departments by the state purchasing agent, thus eliminating an added expenditure of over $500. Another department had on hand a large shipment of wrought and steel pipe, rope, and various other items, which were distributed to the state institutions at cost prices.

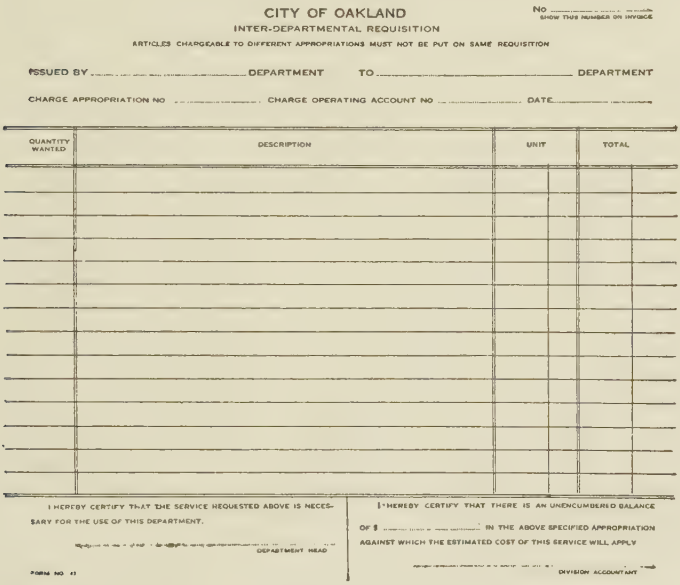
Almost one-half of the cities with centralized purchasing give their central purchasing office authority to transfer surplus stock. In some, as in Portland, Maine, the added consent of the city manager is required; in many, as in Waltham, Massachusetts, the consent of the heads of the relinquishing and receiving departments is required.

In New York City, the sinking fund commission, composed of the mayor, comptroller, and city chamberlain, is the custodian of surplus property, supplies, and equipment. This phase of the commission's work is carried out by a staff member of the division of municipal investigation and statistics of the finance department, under the supervision of the comptroller. Any department head who has on hand equipment or supplies that are surplus or unfit for further use accordingly notifies the sinking fund commission. If the estimated value of such supplies or materials is $100 or over, an appraisal and description of such property is made by the comptroller's representative who then notifies the heads of all departments which might make use of such property. The first applicant receives the property free of charge by transfer. If no department enters a claim, the property may be sold as described below. The value of such interdepartmental transfers in 1926 was $60,000. The amount has varied in other years from $50,000 to $200,000.

An interdepartmental transfer is in the main an accounting procedure. In Oakland, California, the receiving department and the accountant sign a requisition (Figure 69) which is sent to

the head of the relinquishing department as an order to make the transfer. The receiving department is then invoiced for the transferred stock (Figure 70) by the comptroller's office, with copy to the relinquishing department, as a notice that the proper accounting record has been made. In this system the purchasing office keeps no record of the transfer.

In East Cleveland, Ohio, the order for transfer is signed by



CITY OF OAKLAND

No. _____
SHOW THIS NUMBER ON INVOICE

INTER-DEPARTMENTAL REQUISITION

ARTICLES CHARGEABLE TO DIFFERENT APPROPRIATIONS MUST NOT BE PUT ON SAME REQUISITION

ISSUED BY _____ DEPARTMENT TO _____ DEPARTMENT

CHARGE APPROPRIATION NO _____ CHARGE OPERATING ACCOUNT NO _____ DATE _____

QUANTITY WANTED	DESCRIPTION	UNIT		TOTAL	

I HEREBY CERTIFY THAT THE SERVICE REQUESTED ABOVE IS NECESSARY FOR THE USE OF THIS DEPARTMENT.

_____
DEPARTMENT HEAD

I HEREBY CERTIFY THAT THERE IS AN UNENCUMBERED BALANCE OF $ _____ IN THE ABOVE SPECIFIED APPROPRIATION AGAINST WHICH THE ESTIMATED COST OF THIS SERVICE WILL APPLY

_____
DIVISION ACCOUNTANT

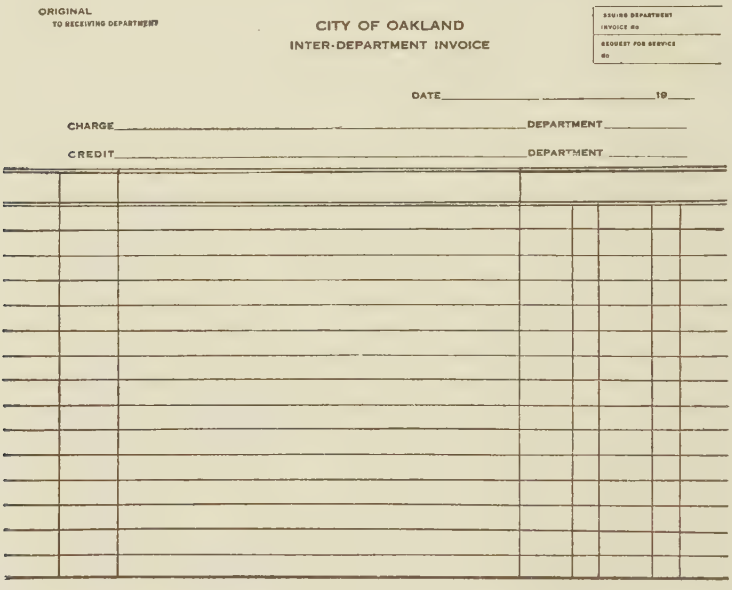
FORM NO. 11

FIG. 69. REQUISITION FOR INTERDEPARTMENTAL TRANSFER, OAKLAND, CALIFORNIA (8½"×7")

the purchasing agent and the head of the relinquishing department, and bears the number of the requisition from the receiving department. One copy of this form is retained by the purchasing office; another is sent to the finance department; the triplicate is sent to the relinquishing department.

Public or Private Sales.—The same agency which is authorized to make interdepartmental transfers should also be vested with power to dispose of obsolete or unusable stock. It is not un-

common for many departments to have on hand a quantity of obsolete or discarded stock which they consider as "junk." But when collected from all departments at the central storeroom or elsewhere, this "junk" may become the source of considerable revenue. Empty containers are usually purchased on the basis of full credit by the supplier when returned by the user. The value


ORIGINAL
TO RECEIVING DEPARTMENT

CITY OF OAKLAND
INTER-DEPARTMENT INVOICE

ISSUING DEPARTMENT
INVOICE do
REQUEST FOR SERVICE
do

DATE_____ 19___

CHARGE_____ DEPARTMENT_____

CREDIT_____ DEPARTMENT_____

FIG. 70. INVOICE FOR INTERDEPARTMENTAL TRANSFER, OAKLAND, CALIFORNIA (8½"×7")

of all such containers used by a government amounts to a considerable sum each year. This may be partially lost through carelessness by the using agencies. For example, it was reported that Baltimore in 1924 paid out over $25,000 for cement sacks, drums, barrels, etc., but that the city realized only $1,400 from the return of such articles.[12]

If the using agencies are required to make and to report annual inventories of personal property, as advocated above, such reports

[12] *Report of Committee on the Proposed Bureau of Stores* to Commission of Efficiency and Economy, pp. 7, 8.

will show many articles of equipment, scrap, etc. which are available for transfer or sale. If the purchasing agency maintains a repair shop in connection with, or separately from, the central storeroom, many pieces of equipment can be repaired and made ready for reissue in lieu of the purchase of new equipment. Equipment which is worn out or otherwise unsuitable for further use can be sold. Reading, Pennsylvania, in 1928 appointed a superintendent of public property who is the custodian of all motor equipment, machinery, and surplus stock and has charge of the municipal garage and municipal repair shop. All worn-out, obsolete, or unusable equipment and supplies are turned over to him, to be transferred, repaired, and reissued, or sold. The economic possibilities of this arrangement have been demonstrated by the General Supply Committee, as noted above.

The General Supply Committee has power also to sell, at auction or on contract, any stock which is no longer of use to the federal government in the District of Columbia. Surplus commodities which cannot be repaired and reissued are offered for sale at auctions. The proceeds of such auction sales have amounted to over $500,000 since 1920. They reached the peak during the fiscal year of 1924, when the proceeds totaled about $180,000. In 1925, auctions netted only $63,000 because the bulk of surplus war stock had been disposed of. Since 1922, nearly $500,000 additional has been realized from sale of surplus *matériel* on contracts. These contracts are awarded after advertisement and receipt of sealed bids, and cover the sale of waste paper, scrap iron, and such commodities, on the basis of a certain price per ton or pound. About $80,000 was received during 1925 by the various departments and establishments of the federal government from the sale of waste paper on contract.

Twenty states permit the sale of obsolete and unusable stock through the central purchasing office or under its supervision. The purchasing agents of Vermont and Montana must secure the governor's approval before selling any personal property of the state. The New Jersey property committee, referred to above, is permitted to sell by auction or contract any stock which is no longer

usable by any branch of the state government. All materials salvaged by the California state harbor commission are sold through the harbor commission branch of the state purchasing office. In four years, from July 1, 1922, to July 1, 1926, this branch office turned into the state treasury over $24,000 from the sale of old lumber and miscellaneous junk. In 1924, the Massachusetts purchasing office realized over $8,000 from the sale of junk from two departments.

Surplus property is appraised before sale in South Dakota by a committee consisting of the director of the finance department and the heads of the purchasing and auditing divisions. Such property may then be disposed of at private or public sale by the purchasing division, provided the sale price is at least 90 per cent of the appraised value.

California counties are permitted by law to sell at public auction any property declared surplus by four-fifths vote of the board of supervisors and after five days' notice inserted in a newspaper or posted in three places in the county. "If the property does not exceed in value the sum of $75 or if it be the product of the county farm," it may be sold at private sale without advertising by any member of the board who is authorized to do so by majority vote of his colleagues. [13]

Surplus and obsolete property is sold through the purchasing office in ninety-eight cities. Milwaukee makes an annual inventory, following which property declared surplus by the city council is sold by the central board of purchases. If the amount involved is over $500, the consent of the city council is required also in Albany, Georgia; Minneapolis; Salt Lake City; and Boston. The approval of the mayor alone is sufficient authorization to sell in Boston if the amount is less than $500. In Indianapolis, the county circuit court appoints a committee to appraise obsolete property. Such property, when so appraised, is disposed of by the purchasing department, after newspaper advertisement. No article appraised at more than $200 can be sold for less than the appraisal value. Advertisement in the official paper is required in

[13] Chapter 165, laws of 1921.

Toledo only when the estimated value of the property is in excess of $250.

In New York City, any supplies or materials which have become obsolete or unusable and cannot be transferred are listed for sale by the holding department, under supervision of the sinking fund commission. Competitive bids are solicited or a public auction is advertised for five days in *The City Record*. A transcript of bids received is forwarded to the comptroller, who sends his representative to make a personal investigation. If the highest bid is satisfactory, the sale is made and the proceeds are turned over to the sinking fund commission, to be applied to the reduction of the city's debt. Proceeds from the sale of old fire hose, fire engines, etc. by the fire department, and of uncalled-for stolen property by the police department, are, however, credited to the pension funds of those departments. The department of education sells old furniture at 50 cents per piece to religious and educational organizations. About thirty-five tons of old books are also sold each year as waste paper and the proceeds are turned into the fund for the purchase of new books.

Some cities, for example Dayton, Philadelphia, and Bridgeport, Connecticut, sell the products of garbage reduction, through the purchasing department. The Philadelphia purchasing department in 1923 returned over $37,000 to the city treasury from the sale of scrap, dead horses, and condemned materials; nearly $192,000 from the sale of garbage grease; and $42,000 from the sale of tankage. During 1924 such sales in Philadelphia totaled $82,000 for garbage grease; $7,500 for tankage; and $5,300 for scrap and miscellaneous commodities. The revenue from sales of miscellaneous property in St. Louis totals about $8,000 per year.

Sales of personal property in San Francisco are handled by the purchasing agent. A sales request (Figure 71) is forwarded by the head of the department concerned, describing the property to be disposed of, giving its estimated value, and bearing the approval of the supplies committee of the board of supervisors.

Spaces are provided at the foot of the form for the purchasing agent's record of the sale.

Philadelphia sometimes contracts for the sale of a given article during a certain definite period, but for an indefinite quantity.

City and County of San Francisco

DEPT.....

SALES REQUEST

Purchaser of Supplies,
270 City Hall.

Dear Sir:

You are hereby requested to arrange the sale of the following personal property unfit or unnecessary for the use of this department:

Location of material .....

Description in detail.....

.....

.....

.....

.....

.....

Original cost price ..... Present estimated value .....

Reason for sale.....

Credit:

Fund .....

Account .....

Approved: Pursuant to Resolution No. 22979 (New Series)

.....

.....

.....

Supplies Committee, Board of Supervisors — Department Head

Sold to ..... Address .....

Quantity ..... Sale Price .....

Bill No. ..... Date .....

FIG. 71. REQUEST TO PURCHASING AGENT FOR SALE OF SURPLUS PROPERTY, SAN FRANCISCO, CALIFORNIA (8½″×11″)

When a truckload or carload has accumulated, the contractor is given a "removal order" (Figure 72). The removal order is made out in five copies. The first three copies are sent to the contractor. The original becomes his permanent record; the dupli-

cate and triplicate copies are turned over by the contractor to the department selling the material. The duplicate copy remains with the selling department head, who sends the triplicate to the pur-

REMOVAL ORDER FOR CONTRACTOR

Be sure to deliver the accompanying sheets to the person from whom material is received.

Department of Supplies

Rooms 310, 311, City Hall

PURCHASING AGENT

Order No. 5303

Philadelphia, _____

Letter of _____

Bureau of _____

Dear Sir:—

You are hereby authorized and directed to remove at once the following old material from _____

ITEM	QUANTITY	ARTICLE

NOTE—If the above material is bid on according to weight, please notify the Department when you intend removing the same, so that we can arrange to have our weigher present.

FIG. 72. ORDER TO CONTRACTOR TO REMOVE SURPLUS PROPERTY, PHILADELPHIA, PENNSYLVANIA (8½″×11″)

chasing office with his signature and statement that delivery has been made to the contractor. The fourth copy is sent to the weigher in the inspection division of the purchasing office. After the materials are weighed and delivered to the contractor, the

weigher sends the fourth copy to the purchasing office as a notice of the amount sold. The fifth copy is kept in the purchasing office as a temporary record until receipt of the triplicate copy from the delivery department.

Form 8

Purchasing Department
CITY OF CINCINNATI

Cincinnati, O. _____ 19 ___

To CITY AUDITOR,
Cincinnati:

Dear Sir:

Enclosed we hand you $_____ covering sale

to _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Kindly acknowledge receipt, and oblige,

Very truly yours,

ERNST VON BARGEN,
PURCHASING AGENT.

Per _____
Secretary.

FIG. 73. REPORT ACCOMPANYING PROCEEDS OF SALE OF SURPLUS PROPERTY, CINCINNATI, OHIO (5″×8″)

Proceeds from public sales of miscellaneous commodities are sometimes received in cash, which is transmitted by the purchasing agent to the finance department with a detailed statement. The form used in Cincinnati for this purpose (Figure 73) is representative.

CHAPTER XI

ACCOUNTING CONTROL OVER PURCHASES

STRICT accounting control is essential to a satisfactory purchasing procedure. The purchasing official must collaborate with the budgetary officials to keep the expenditures for supplies, materials and equipment within the budget allowances, if the government is to "make both ends meet." As already pointed out, this collaboration is easier to achieve and more logical in execution if the purchasing office is a division of the finance department.

Much of the extravagance which has sometimes marked governmental buying has been due to a lack of proper accounting control over expenditures. Of course, in emergencies the work of government cannot be delayed to satisfy an accounting requirement; but it is now generally agreed that no purchase should be made, except in extreme emergency, for which funds have not been regularly appropriated and for which sufficient appropriation balance is not available.

It is not the province of this chapter to discuss accounting procedure, but merely to point out the steps in purchasing wherein the accounting office plays a rôle. The accounting office is concerned with preventing illegal expenditures for *matériel*; with charging expenditures to the proper appropriations; with preventing overexpenditure of budget appropriations; in making sure that nothing is paid for which has not been received; in securing the benefits of discounts for prompt payment; and in eliminating duplicate payments. These functions will be discussed in their relationship to requisitions, orders, and invoices.

Accounting Control over Requisitions.—A previous chapter has already indicated that approval of the requisition by the finance office is required in some purchasing systems. In Mil-

waukee the comptroller is furnished with a copy of the requisition for repair work, rental of equipment, and telephone, gas and electric service, and notes his approval thereon before the purchasing agent begins the purchasing negotiation. In Sacramento, California, the original copy of the requisition, which remains as the permanent record in the purchasing office, is sent to the comptroller for his signature and approval before requests for quotations are sent out.[1] The comptroller of the state of New Jersey also approves requisitions before the purchase is negotiated. In all these systems, the amount of the requisitions is recorded as an encumbrance against the accounts affected.

Another plan requires the head of the requisitioning department to certify over his signature that the estimated cost of the *matériel* asked for does not exceed the balances of the appropriations concerned (See Figures 11 and 15). This system is workable in those governments which have departmental accounting staffs, such as New York City. Here each department knows at all times what are the balances in the various appropriations. It is, however, a cumbersome and costly arrangement.

In fourteen cities, the comptroller or auditor must approve requisitions before the purchasing agent can proceed with the purchase. In three cities requisitions involving amounts over a certain sum require the approval of the city council, except in emergencies. In Davenport, Iowa, councilmanic approval is necessary for estimated expenditures in excess of $200; in Minneapolis and Nashville, if over $1,000, as already explained in Chapter VI.

A "preaudit" of requisitions insures a close accounting control, but it has several disadvantages. In the first place, the requisitioning department can rarely estimate exactly the amount of the expenditure, except in the case of commodities with stable market prices. The exact amount involved generally cannot be determined until quotations have been secured and the order or contract is ready for award. The encumbrance against the appropriation therefore can only be tentatively made at the time the requisition is examined by the comptroller's office. For exact

[1] See Chapter VI, pp. 137, 139, and 140, and Figures 10 and 11.

accounting control, the appropriation must be reëncumbered when the amount of the expenditure is definitely established after purchase negotiation. Such procedure needlessly duplicates the accounting work. To delay the purchase until the requisition is approved may hold up the securing of the needed commodities and be costly to governmental service. Of course, the purchasing office may be supplied with a copy of the requisition at the same time as the comptroller and, by a working agreement with the finance office, may proceed with a minimum of delay to arrange the purchase.

It is even more unsatisfactory to postpone purchase awaiting councilmanic approval of the requisitions, since the council generally meets infrequently.

Accounting Control over Orders.—A preaudit of the order by the finance office is one of the essential steps in sound purchasing procedure. It is necessary for accurate budget execution. The preaudit is most easily made on the order or contract before it is issued by the purchasing office, for the exact amount of the expenditure is then known except in the case of contracts for indefinite amounts. One entry on the appropriation ledger then suffices. Even though a preaudit of the requisition is required by law, the comptroller or auditor should approve the order before its issue to insure the availability of adequate funds to pay the invoice when submitted by the vendor. The importance of the preaudit cannot be overemphasized.

The system followed in Akron, Ohio, may serve to illustrate the proper accounting control over purchases. When the order or contract is ready for issue, the purchasing office (a division of the finance department) sends a copy to the director of finance. The latter enters the amount of the order as an encumbrance against the appropriation or appropriations concerned. The entry is made on the encumbrance ledger (Figure 74). This encumbrance sets aside the amount of the order to be used exclusively for payment of the invoice when received from the vendor; it also insures funds for prompt payment. In its effect it is similar to a "certified check" against one's personal bank account. Space is

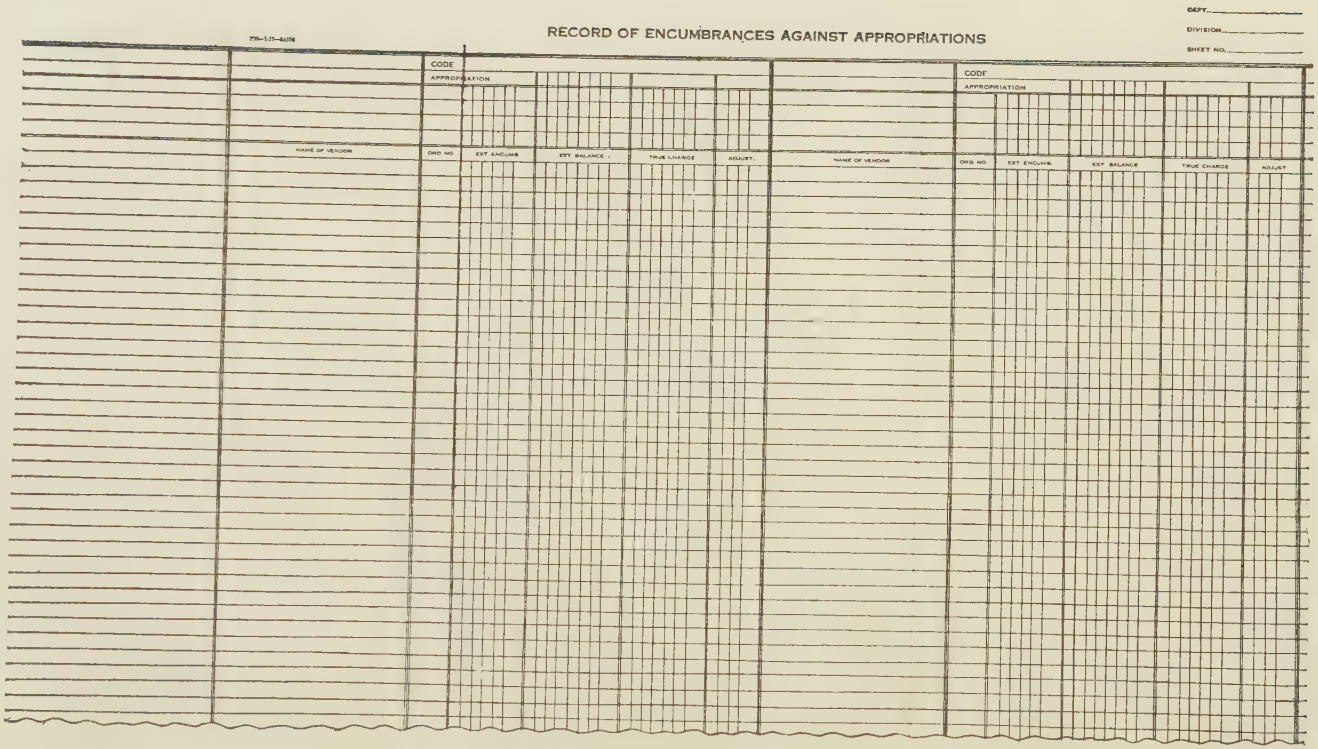
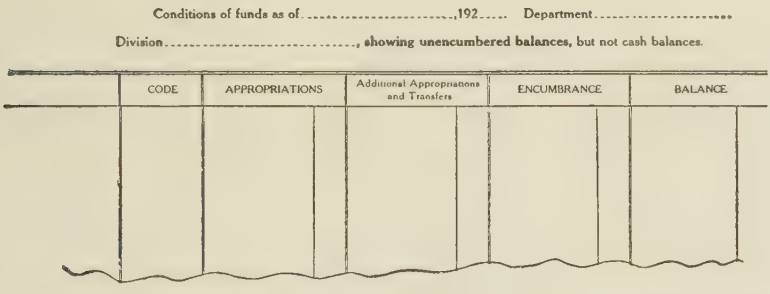


FIG. 74. ENCUMBRANCE RECORD FORM, AKRON, OHIO (22″×18″)

provided on the form for adjustment of the amount in case of a change in the order; if the order is for an indefinite amount, the encumbrance is estimated, subject to adjustment when the invoice is on hand.

Monthly, or at more frequent intervals, each department and division in Akron is notified by a report (Figure 75) of the condition of its appropriations. The report shows unencumbered


Conditions of funds as of .....192..... Department .....

Division ....., showing unencumbered balances, but not cash balances.

CODE	APPROPRIATIONS	Additional Appropriations and Transfers	ENCUMBRANCE	BALANCE

FIG. 75. REPORT ON UNENCUMBERED BALANCES OF APPROPRIATIONS, AKRON, OHIO (8½"×11")

balances, but not cash balances, on account of adjustments which may later be required.

The certification of the comptroller as to sufficiency of appropriation balance is generally entered on the copy of the order which remains in the purchasing department, while the copy sent to the vendor bears only the signature of the purchasing agent (See Figure 38). This is the system followed in Milwaukee. The comptroller of that city makes a preaudit of all orders before their issue, and in addition approves a certain class of requisitions as to sufficiency of appropriation balances, as already pointed out in Chapter VI.[2] In some systems, the approval of the comptroller is shown on all copies of the order, including the original sent to the vendor, as illustrated by Figure 31. The first plan (See Figure 38) is more generally followed; it is less confusing to the vendor

[2] See pp. 137 and 139 and Figure 10.

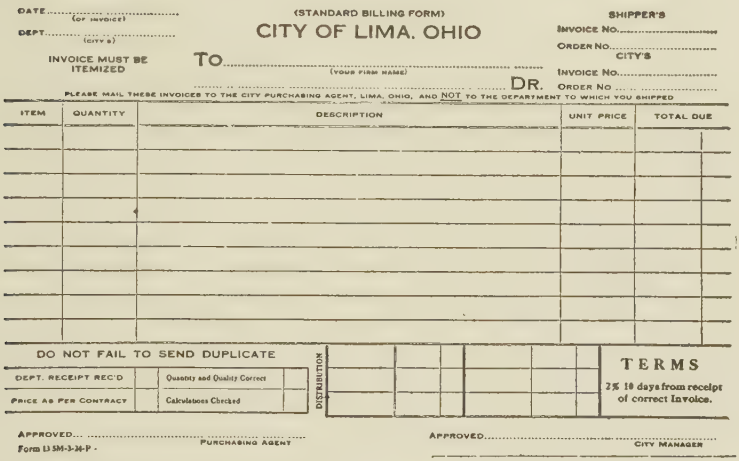
and gives him no excuse to assume that the responsibility for purchase is divided between the comptroller and the purchasing agent.

One of the most important by-products of the preaudit is to prevent conversion of appropriation balances to supplies, materials, or equipment at the end of the fiscal year. The purchasing agent of a New York state educational institution admitted with pride to the writer that he and the comptroller cooperated with department heads by issuing "phantom" orders sufficient in amount to use up any appropriation balance, or by issuing a credit memorandum to the amount of the balance, so that supplies could be ordered during the next fiscal year, although paid from funds appropriated for the current year. This effectually prevented any lapse of unexpended balance to the state treasury. Obviously such procedure is not to be condoned. The purchasing agent should, instead, scrutinize with care any requisition received toward the end of the fiscal period; if it is unreasonable and in excess of the probable requirements of the requisitioning department for the remainder of the period, it should be disapproved or reduced. If the purchasing agent fails in this function, the comptroller can hold up the expenditure when he makes the preaudit of the order.

Accounting Control over Invoices.—The written statement of the amount of the government's indebtedness to the vendor for goods delivered, although variously called "bill," "claim," or "invoice," is more generally referred to as the "invoice," and will be so designated in this discussion.

1. Source of Invoice.—Some governments require the use by the vendor of the government's own form of invoice. In such cases, the blank invoice always accompanies the order. This plan has obvious advantages for the buyer, for it facilitates the checking, handling, and paying procedure. All invoices received are thus of a uniform size, so that they can be filed more easily and found without effort in case they must be consulted later. The entries for signatures of approving officers are always in the same respective positions, as are the spaces for records of the accounting office in distributing the charges to the proper funds.

Lima, Ohio, submits a standard billing form in triplicate with all orders. All copies are returned by the vendor to the purchasing agent. The original (Figure 76) is sent to the city auditor for payment after being checked and approved by the purchasing agent and the city manager. The duplicate remains with the purchasing agent, to be filed with the office copy of the purchase order as a part of the permanent record of the transaction. The third copy


(STANDARD BILLING FORM)

DATE ..... (OF INVOICE)

DEPT. ..... (CITY'S)

CITY OF LIMA, OHIO

SHIPPER'S INVOICE NO. .....

ORDER NO. .....

CITY'S INVOICE NO. .....

CITY'S ORDER NO. .....

INVOICE MUST BE ITEMIZED

TO ..... (YOUR FIRM NAME)

DR.

PLEASE MAIL THESE INVOICES TO THE CITY PURCHASING AGENT, LIMA, OHIO, AND NOT TO THE DEPARTMENT TO WHICH YOU SHIPPED

ITEM	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL DUE

DO NOT FAIL TO SEND DUPLICATE

DEPT. RECEIPT REC'D		Quantity and Quality Correct	
PRICE AS PER CONTRACT		Calculations Checked	

DISTRIBUTION

TERMS

2% 10 days from receipt of correct Invoice.

APPROVED ..... PURCHASING AGENT

APPROVED ..... CITY MANAGER

Form LI SM-3-36-P -

FIG. 76. INVOICE SENT TO VENDOR WITH ORDER, LIMA, OHIO (8″×5½″)

is also sent to the auditor to be returned by him to the vendor along with the city's check in payment, as a means of identification of the transaction in the vendor's office. It is to be noted that this form shows both the vendor's and city's invoice and other numbers. The city's invoice number is assigned by the auditor in the order of receipt.

Detroit submits an invoice-voucher (Figure 77) in duplicate with the order. Both copies are returned by the vendor for checking and the subsequent routine incident to payment.

Monterey County, California, sends one copy of a blank invoice with each order. This form (Figure 78) provides for the affidavit requirements in detail, as discussed below.

CITY PURCHASE ORDER NO._____

City of Detroit
DEPARTMENT OF PURCHASES AND SUPPLIES
710 MARQUETTE BLDG.—CONGRESS & WAYNE 978

NOTE
BILL EACH ORDER SEPARATELY

TELEPHONE MAIN 9461

INVOICE-VOUCHER

VENDOR'S INVOICE NO._____

ATTENTION! No payments can be made unless billed on this form in duplicate and affidavit on reverse side sworn to, to conform to charter provisions.

VENDOR'S NAME ONLY

_____ _____ 19___

BILL DAY OF SHIPMENT—FOLLOW INSTRUCTIONS.

QUANTITY	UNIT	ARTICLE OR SERVICES	UNIT PRICE	TOTAL
			TOTAL	

ORIGINAL

FOR THE DEPARTMENT OF PURCHASES AND SUPPLIES. QUANTITY, QUALITY AND PRICE CORRECT.

_____ AUDITOR

_____ COMMISSIONER

FOR THE CONTROLLER. EXTENSIONS, FOOTINGS, CERTIFICATES AND BACKING CORRECT.

_____ EXAMINER

FIG. 77. INVOICE SENT TO VENDOR WITH ORDER, DETROIT, MICHIGAN (7″×8½″)

The National Association of Purchasing Agents has for a number of years advocated the use of a "national standard invoice form." In 1926 the division of simplified practice of the United States Department of Commerce succeeded in securing widespread consent by both buyers and vendors to the use of a "simplified invoice" based on the original "national standard form," with appropriate modifications.[3] This form is well adapted to commercial use, but will probably never meet with general use

[3] Simplification project number 36, discussed also on pp. 157 and 212.

in government on account of the marked differences in accounting requirements.

To require the use of the buyer's invoice subjects the vendor to considerable inconvenience. Delay often ensues between receipt of order and date of shipment, especially if the order calls for special manufacture of the commodities ordered. In such cases, the buyer's invoice must be kept on file until shipment is made. Invoices are generally filled out and submitted by the ship-

NOTE CAREFULLY
INSTRUCTIONS TO CLAIMANTS ON BACK OF THIS CLAIM

COUNTY OF MONTEREY
STATE OF CALIFORNIA

CLAIM OF ..... 192....

ADDRESS .....

Department to whom supplies or service was rendered .....

DATE	ORDER No.	DESCRIPTION	AMOUNT Dollars	AMOUNT Cents

I HEREBY CERTIFY that the above claim and the items as therein set out are true and correct; and that no part thereof has been heretofore paid, and that the amount therein is justly due and is presented within one year after the last item thereof has accrued.

..... *Claimant*

Subscribed and sworn to before me this..... day of ....., 192.....

I. J. CORNETT, County Auditor

By ..... *Deputy Auditor*

FOR VALUE RECEIVED, I hereby sell, assign, transfer and set over to

.....

all my right, title and interest in the above claim

Signed .....

Dated .....

I hereby consent to said assignment.

Wife of Claimant: .....

CLAIMANT WILL NOT WRITE IN SPACE BELOW THIS LINE

I hereby certify, upon my personal knowledge, that the articles or service have been delivered or performed as stated hereon except as otherwise indicated above by me.

.....
Head of Department

I hereby certify that this claim was filed ..... and that I have examined the facts of the transactions herein set forth as evidenced by the above and documents attached hereto.

$ ..... payable from ..... Fund is hereby allowed. I further certify to the correctness of the foregoing computations.

I. J. CORNETT, County Auditor

By ..... *Deputy Auditor*

Department .....

Organization Unit .....

Object .....

Audited by .....

Post Expenditure Ledger .....

Warrant No. .....

FIG 78. INVOICE AND SUPPORTING AFFIDAVIT, MONTEREY COUNTY, CALIFORNIA ($8\frac{1}{2}'' \times 11''$)

ping or accounting office, while the order is received by the sales office. Furthermore, most firms use billing equipment which often is not adapted to the use of the peculiar size and style of the buyer's invoice. The invoice must then be specially filled out, increasing the vendor's overhead cost. Besides, most vendors want to show on invoices their firm name and trade-mark insignia as a means of advertising. Frequently those governments which specify the use of their own invoice forms find their request ignored by the vendor. To return the vendor's invoice for resubmission in proper form often entails delay and, consequently, loss of discount in payment.

For these reasons, most governments are content to permit the use of the vendor's invoice form. The checking, approving, and accounting routine can be carried out on any invoice by the use of a rubber stamp especially designed to provide for all necessary entries and signatures.

2. Time of Submitting Invoice.—New York City requires that invoices in quadruplicate must accompany deliveries. This practice is rapidly disappearing in governmental purchasing systems. It tends to delay delivery of goods and the payment of invoices. Practically all vendors prepare invoices in a different division from the shipping office. Invoices are as a rule prepared on the day following shipment, from a memorandum submitted by the shipping clerk. To require the invoice to accompany the delivery wastes time and disrupts the regular routine in the billing office.

The general practice is to receive goods without invoice, and to check the invoice with the delivery report submitted by the receiving or inspecting official (See Figures 48-50 and 53-55).

3. Affidavit with Invoice.—Some state laws, for example New Jersey, require that all claims against local governments within the state shall be accompanied by an affidavit.[4] Although the form of the affidavit varies, it states in substance that the claim is valid, that the goods for which payment is demanded have been delivered, and that the claim has not before been paid. In

some cases, the original copy of the order, as well as an affidavit, must accompany the invoice.

The invoice form of Monterey County, California (See Figure 78), provides that affidavit be made before the county auditor or his deputy, and permits the assignment of the claim by the original claimant. Second class cities of New York state also furnish a similar form of invoice with the order. This system sometimes requires the vendor or his authorized representative to appear in person with his claim to make affidavit. Such requirement practically limits competition to local dealers, since the out-of-town or out-of-state supplier can seldom afford to accompany his claim in order to secure the public business. Generally, however, affidavit can be made before any notary public, which does not delimit competition. But at best this requirement is vexatious and costly to the vendor in time and money. On small invoices, the notary's fee may consume all profit on the business involved. The writer has personally on several occasions paid the face value of a claim against a government for the fee of making affidavit.

The affidavit with invoice serves little purpose except to satisfy a legal requirement. The deponent usually takes oath perfunctorily; but even so, it generally works a hardship on him, since each invoice must be taken to a notary or to the office of the buyer, and separately sworn to. This requirement has helped to stigmatize government purchasing procedure as "red tape." It never reduces the price. On the contrary, the buyer invariably pays in increased prices for the extra steps required of the vendor. It also discourages competition, for often the best vendors prefer to find a

[4] The requirement for affidavit with claim is set forth in laws of New Jersey, 1871, p. 92, as follows: "It shall not be lawful for the board of chosen freeholders, or the township committee, or common council, or commissioners of any county, city, township, town or borough in this state to pay or disburse out of any of the moneys of said county, city, township, town or borough, to any person, unless the person claiming or receiving said moneys shall first present to the party or parties paying any such moneys, a detailed bill of items or demand, specifying particularly how such bill or demand is made up, and the dates and the names of the persons to whom the amounts composing such bill or demand were severally paid, with the affidavit of the party claiming payment of said bill or demand that the same is correct; and any disbursing officer is authorized to take such affidavit without cost."

market with private concerns and thus avoid compliance with public "red tape" requirements. The buyer must exercise the same care to prevent duplication of payment, false claim, or unsatisfactory delivery, regardless of the presence or absence of an affidavit with invoice. Except for a large contract, it is a superfluous practice which should be eliminated from public buying.

4. Responsibility for Approval of Invoices.—As already pointed out, invoices are submitted in New York City to the receiving or using agencies. This is the practice in nine other cities and in seven states. This plan is usually necessary in states where the delivery is made to, and inspected by, the using agencies. In five states and in two cities the approval of the receiving official suffices as authorization for payment of the invoice. The submission of invoices to the using agency is to be discouraged because of the delay in checking and approval which often ensues and which prevents the taking of discounts for prompt payment. In New York City in 1911 "various departments purchasing supplies consumed upward of an average of 43 days in passing vendors' claims to the comptroller for final audit." [5] This interval is longer than the usual discount period, so that claims in such cases have to be paid at their face value.

Elsewhere, the additional approval of some other official is required as an extra check on the validity of the claim. The old adage of "two heads are better than one" applies here, for an inaccuracy in an invoice, or a duplicate claim which escapes notice in one office, may be detected by a double check.

It is believed that the invoice should be submitted either to the purchasing or to the accounting office. In two states and eight cities the purchasing agent takes no hand in the process of checking and approving invoices, which is the joint responsibility of the receiving and using agencies and the central accounting office. The department of purchase in New York City, for example, plays no rôle whatever in this function. The using department checks and approves the invoice, and prepares the warrant which accompanies the invoice to the bureau of audit of the finance department where

[5] Bruère, *The New City Government*, p. 228.

the final approval is made prior to payment. Both the using department and the finance department are supplied with a copy of the order with which to check the invoice.

The finance or accounting office of course has the final approval of all invoices; but its approval is often rather perfunctory and does not approach a real audit in those systems where the using agencies are given sole responsibility for checking and approval of invoices. Thirty-six cities and fourteen states require approval and checking of invoices by both the using agencies and the purchasing office before the claim reaches the accounting office.

The best system, it is believed, divides this responsibility between the purchasing and accounting offices. The invoice, especially in counties and cities, should be submitted directly to the purchasing agent. His are the most complete records of the specifications, the prices, and the quantities ordered. He should, therefore, be best qualified to pass upon the validity of claims. His acquaintance with market prices and his knowledge of contract terms are necessary for checking invoices covering orders and contracts which are awarded at an indefinite price or for an indefinite quantity. In certain states, like Washington, where the central purchasing office awards the general contracts, subject to order from the separate using branches, the receiving official in the using branch should of course be a party to the approval and checking process. Three states and fourteen cities have their invoices received and checked by the purchasing office, subject to a recheck by the accounting officer. This is the procedure in Detroit, as shown by Figure 77.

Other systems place full responsibility upon the purchasing office for handling invoices. This is the practice in thirteen states and fourteen cities. But in five cities and in New York state the finance office has sole responsbility for approving invoices. As already pointed out, in some cities the head of the finance department acts also as purchasing agent.[6] In such cases, for example Fresno, California, and Edmonton, Alberta, the accounting control of invoices is thus centralized in the office of the comptroller

[6] See Chapter III, p. 59.

or auditor. In some of the smaller cities, the manager's approval of invoices is required (See Figure 76).

In certain cities, the ultimate responsibility for approving invoices for payment is vested in the council. In counties, this is usually a function of the county board. On the reverse side of the invoice form of Monterey County, California (See Figure 78), the claimant is instructed to file his claim not later than "Thursday before the first Monday of each month," to insure its consideration by the board of county commissioners at its next regular monthly meeting. Otherwise, the payment must be delayed until the following meeting of the board. The common council of Detroit must approve all claims for payment. In cities with the commission form of government, the whole commission is often required to pass upon all invoices. In other cities, for example Bridgeport, Connecticut, the finance committee of the council is clothed with authority in this matter. Still another practice calls for councilmanic approval of all claims exceeding a certain maximum, generally $1,000. This is the plan followed in Davenport, Nashville, and Minneapolis.

Since the legislative body in most cases meets rather infrequently, to require its approval slows up the process of paying invoices. Such delay is costly when discounts on invoices are at stake. The chief fiscal officer should be given authority to handle this matter, with the help of the purchasing agent. The legislative body often finds much of its time consumed in approval of claims. It should be freed from this task for its real and more important legislative function.

5. Advertisement of Invoices.—The paying of invoices is also delayed in some governments through the legal requirements for advertisement of all pending claims. Prior to January 1, 1928, when city manager government became effective, all claims against the city of Rochester, New York, had to be advertised in the official newspaper and could not be paid until at least five days after such notice. The cost of such advertising amounted to about $6,000 per year. Fortunately, however, this requirement is fast becoming obsolete in all governments, for it accomplishes nothing.

Many governments still advertise pending claims on public works contracts. In San Francisco the city pays for the cost of such advertising. By a 1927 law, contractors in Alabama must advertise at their own expense all claims on public works contracts with the state and local governments, for three successive insertions in a newspaper of general circulation.

6. The Checking of Invoices.—Although the details of the checking procedure vary widely, the end in view is in all cases the same—to establish the validity of the invoice and to prevent duplication in payment. The means and the personnel employed in checking invoices also vary widely from the one-man purchasing or accounting office to the office with a special staff devoting full time to such work. The checking of invoices is for the most part a routine matter which can be performed by an "invoice clerk." Practice in identifying the essential data on an invoice speeds up the process so that the unit cost of checking is very low where full-time specialists are employed. The discussion here is confined to the part customarily played by the purchasing office.

Invoices are generally stamped with the date and hour when received and are often assigned a number in the order of receipt. The claimant is required to give the order number upon which the claim is based, to facilitate checking (See Figures 76 and 77). The invoice is then checked against the copies of the order or orders concerned, which are available in the "live order" file,[7] as a means for determining whether the unit price, the quality, and the extensions are correct. If so, the signature or initials of the checker, or a check mark, is placed in the proper spaces on the rubber stamp imprint or on the buyer's invoice especially designed for such purpose (See Figure 76).

The report of the storekeeper, inspector, or other receiving official is then consulted to determine whether the quantity delivered corresponds with the quantity invoiced. If a chemical or physical test has been made, the laboratory report is consulted to determine whether the quality of delivery is satisfactory. The inspection report, delivery receipt, and laboratory report should be

[7] See Chapter VIII, p. 218.

attached to the copy in the live order file, so that all necessary supporting documents are consolidated for checking purposes.

Some of the larger purchasing offices have a traffic clerk to check carrying charges (See Figure 3). If the order price is f.o.b. factory or shipping point, but carrying charges have been prepaid, then the invoice item for transportation must be checked with the established tariffs. The traffic clerk is also responsible for checking all bills from carrier for carrying charges on consignments sent collect; but in most purchasing offices the invoice clerk is responsible also for checking traffic charges. The necessity for checking this item is eliminated by requiring all bidders to quote prices on the basis of delivery at point of use (See Figure 22).

If the instant invoice covers complete delivery of the order, the copy is removed from the live order file to be sent with the original invoice to the accounting office, is retained with a copy of the invoice and the records of the bids as a permanent record in the purchasing office, or is otherwise disposed of in accordance with the established routine. If the instant invoice represents only a partial delivery, this is noted on the face of the copy in the live order file (See Figure 39), or in spaces provided on the back of the order, which remains on file until delivery is complete.

If for any reason the invoice is incorrect, it is usually returned to the vendor for correction. Lima, Ohio, has a form (Figure 79) listing the various possible errors in the invoice. This is attached to any invoice returned, with the mistakes noted by check marks in the appropriate spaces. The form also provides space for any special message to the vendor. Detroit sometimes corrects invoices which do not conform with the order, and notifies the vendor on a special form of the changes which have been made. Although the Detroit method is a time-saver, the Lima method is likely to be more satisfactory in the long run, since the city thus does not assume responsibility for invoice changes.

If the invoice price corresponds with the purchase price, the government usually expects to pay it without question. The bureau of audit of the New York City finance department, however, frequently exercises the prerogative of revising downward

any invoice price on an open market order (under $1,000), which, by charter provision, must be "fair and reasonable." [8] If the order and invoice price is in excess of the market price, even though the order has been awarded by competitive bidding, the comptroller has been judicially upheld as within his power in re-

FORM M20 1M-9-22

THE CITY OF LIMA, OHIO
OFFICE OF CITY PURCHASING AGENT DATE_____

To_____

Your Invoice No._____ dated _____ is returned herewith for the reason checked below:

_____Invoice not dated.
_____City Purchase Order number not shown.
_____Not rendered on Form M-13.
_____Not rendered in duplicate.
_____Prices not correct per order.
_____Extensions not correct.
_____Discount not per order.
_____Transportation charges not allowed.
_____Packing charges not allowed.
_____Name and address of your firm not shown on invoice.
_____Goods furnished without authority of City Purchasing Agent or City Manager
(We pay cash in ten days from RECEIPT of correct invoice.)

THE CITY OF LIMA IS NOT RESPONSIBLE FOR GOODS FURNISHED UNLESS ORDER IS APPROVED BY THE CITY MANAGER OR CITY PURCHASING AGENT BEFORE GOODS ARE DELIVERED.

Your co-operation and good-will is urged and appreciated.

_____
City Purchasing Agent.

FIG. 79. FORM ACCOMPANYING INVOICE WHEN RETURNED TO VENDOR FOR CORRECTION, LIMA, OHIO (8½"×5½")

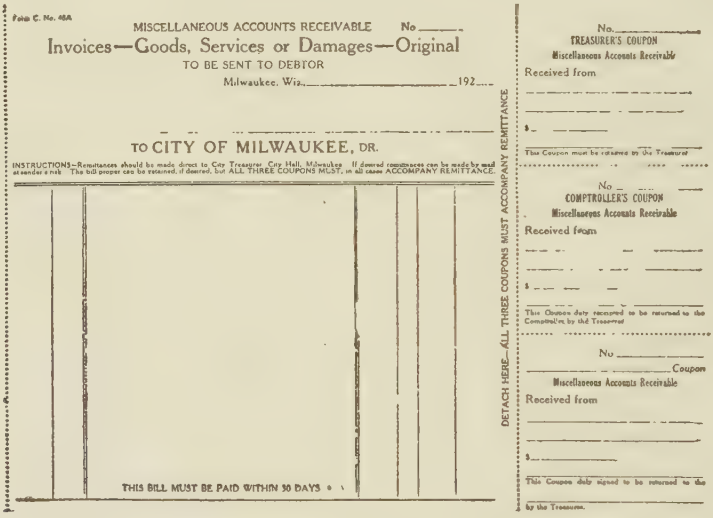
ducing it. Although this prerogative is exercised very seldom, it nevertheless tends to prevent the payment of exorbitant prices by the city.

When invoices have been checked and have been signed or initialed by the proper officials, they are forwarded to the accounting office daily or oftener, depending upon the number of invoices

[8] Charter section 149 provides: "No claim against the city or counties, payable from the city treasury, for work done or supplies furnished, except (1) judgments, (2) charges ordered paid in judicial proceedings, (3) contracts (over $1,000) made at public lettings in accordance with section 419, or (4) claims settled by the comptroller, shall be paid unless an auditor of accounts shall certify that the charges therefore are just and reasonable . . ." The comptroller of New York City in theory is to be a party to all city orders and contracts. He is represented at all public lettings of contracts over $1,000, but is not a party to open market orders. He therefore reserves the right to review open market orders when the claim is submitted.

being handled. They are generally accompanied by a register on which all invoices are listed by numbers or other identifying data. This register is checked by the accounting office to see whether any invoices have perchance been lost in transit.

Milwaukee follows a consistent practice of paying all invoices promptly to secure the discount. Occasionally an invoice is paid before damages or shortage in delivery has been determined. In such cases, the city sends the supplier an invoice (Figure 80) for


Form C. No. 48A

MISCELLANEOUS ACCOUNTS RECEIVABLE No _____

Invoices—Goods, Services or Damages—Original

TO BE SENT TO DEBTOR

Milwaukee, Wis., _____ 192__

TO CITY OF MILWAUKEE, DR.

INSTRUCTIONS—Remittances should be made direct to City Treasurer, City Hall, Milwaukee. If deemed convenient remittances can be made by mail at sender's risk. The bill proper can be retained, if deemed, but ALL THREE COUPONS MUST, in all cases ACCOMPANY REMITTANCE.

THIS BILL MUST BE PAID WITHIN 30 DAYS

DETACH HERE—ALL THREE COUPONS MUST ACCOMPANY REMITTANCE

No. _____

TREASURER'S COUPON

Miscellaneous Accounts Receivable

Received from

$ _____

This Coupon must be retained by the Treasurer

No. _____

COMPTROLLER'S COUPON

Miscellaneous Accounts Receivable

Received from

$ _____

This Coupon duly receipted to be returned to the Comptroller by the Treasurer

No _____

_____ Coupon

Miscellaneous Accounts Receivable

Received from

$ _____

This Coupon duly signed to be returned to the _____ by the Treasurer.

FIG. 80. INVOICE FOR REFUND ON ACCOUNT OF DAMAGES OR SHORTAGE IN DELIVERY, MILWAUKEE, WISCONSIN (10½"×6⅜")

the amount due as a refund. The form is issued in triplicate. The original (Figure 80) is sent to the creditor; the duplicate is sent to the comptroller; the triplicate copy is retained by the department making the claim. The original has three coupons, which are to be attached to the remittance and which complete the accounting records in the city offices.

7. Discounts on Invoices.—The deduction of discounts for prompt payment is a fiscal function with which the purchasing agent is not directly concerned; but the purchasing agent can greatly increase the amount saved in discounts through proper

team-work with the accounting office. Naturally it is not possible to pay all invoices within the discount period. Reports on laboratory tests are frequently delayed. Sometimes the receiving official delays checking and approving the invoice, if it goes to him first for such purpose. In long-distance freight shipments, the invoice commonly arrives several days or even weeks in advance of the goods. Almost without exception, governments are prevented by law from paying an invoice until the goods have actually been received. Contrariwise, private corporations frequently pay invoices in advance of deliveries in order to save the discount, depending upon the supplier to make any necessary adjustment. On many contracts for which a surety bond has been furnished, governments could safely pay some bills in advance of delivery to save the discounts, depending upon the supplier to adjust any shortage or damages.

Despite the importance of prompt payment, some governments have been notoriously lax in doing so. In Charleston, South Carolina, "an analysis of 149 vouchers chosen at random from the 1923 vouchers showed that an average period of sixty-four days elapsed between the date of the claim and the date of payment. The shortest period was fourteen days and the longest period was 353 days. The period was thirty days or more for 83 per cent of the 1923 vouchers examined. It is noteworthy that none was for ten days or less." [9] The city of Charleston undoubtedly lost much from this delay in payment. Experience has shown conclusively that the government with a reputation for slow payment will bear the interest for the period during which the supplier expects to wait, the interest being included in advance in his bid. On the other hand, the government which establishes a reputation for prompt payment will be given preference and lower prices by many reputable vendors. Prompt payment of invoices, therefore, pays directly through cash discounts, and indirectly through lower unit costs on future orders.

[9] *Report of Survey of the Government and Audit of Finances of the City of Charleston, South Carolina,* by New York Bureau of Municipal Research, 1923, p. 29.

Some governments arbitrarily set a certain discount rate for prompt payment. This is sometimes made a part of the request for quotation.[10] Milwaukee, however, asks bidders to state with their bids the discount for payment "within ten days after *receipt of goods* by the city." The invoice form of Lima, Ohio (See Figure 76), which accompanies the order, notifies the vendor, on the other hand, that the city will take a discount of 2 per cent for payment within ten days "from receipt of *correct* invoice." This phraseology protects the city against loss of time in case the invoice has to be returned for correction with the form illustrated by Figure 79. The state of Massachusetts in 1924 established a ruling, and notified all vendors, that thereafter all invoices would be subject to 2 per cent discount for payment within fifteen days after *receipt of goods* which provides for cases of long shipment, where invoice precedes delivery. The United States government computes the discount period "from date of the delivery of the supplies to carrier when final inspection and acceptance are of point of origin, or from date of delivery at destination or port of embarkation when final acceptance are at those points, *or* from date correct bill or voucher properly certified by the contractor is received if the latter date is later than the date of delivery." This clause is made a part of the standard form of bid.[11]

As a means for speeding up the approval of invoices, some governments use the "flag" system, by which those invoices subject to discount are distinguished in the file by a small flag or sticker. This flag informs the invoice clerk that he is to hasten his examination and rush the invoices through to the accounting office for payment as quickly as possible.

Although the amount of discount on each invoice may be small, the aggregate amount is often considerable. In 1920 the total discounts on invoices passing through the Waltham, Massachusetts, purchasing office equaled the total overhead purchasing cost. For the past several years, the discounts on invoices in Milwaukee have averaged $35,000 per year, which is more than the total operating

[10] See Chapter VII, pp. 165, 166.

[11] *Standard Form No. 31,* approved by the President, June 10, 1927.

cost of the purchasing department. The procedure of paying invoices in Rochester, New York, has been greatly simplified under city manager government. Under the requirements prior to January 1, 1928, an invoice could not be paid in less than twenty-eight days; in actual practice the average time between receipt of invoice and its payment was usually much longer. At the present time most bills subject to discount are being paid within the discount period, and the city is saving about $1,200 per month in this way. By its change in policy referred to above, Massachusetts saved over $193,000 in discounts in 1924, which was more than twice the amount saved the preceding year. Prompt checking and approval of invoices is a potential saving which should not be overlooked by any buying office. It is an integral part of the purchasing function.

Although normally the function of the purchasing office ceases when the invoice is checked, approved, and sent to the accounting office for payment, the purchasing agent is frequently concerned with certain aftermaths of the purchasing procedure. As pointed out in Chapter IX, he may be a party in interest to any litigation brought by a supplier for collection of claim covering a rejected delivery.[12] Commodities may also have latent defects which are discoverable only after they have been put to use; in such cases the purchasing agent is invariably involved in any necessary adjustment with the supplier. Furthermore, it is extremely important for the purchasing agent to watch the performance record of commodities which he has purchased, as a means for determining whether the source of supply is satisfactory, whether the specification should be changed, or whether the government has secured a *quid pro quo* for the amount expended.

The various steps in accounting control of *matériel* expenditures add to the overhead cost of administration. The division of accounts of Toledo, in checking encumbrances, checking invoices, preparing vouchers and keeping all other necessary records, spent an average of $1.35 per voucher for the office overhead.[13]

[12] See p. 240.

[13] *"Survey of the Division of Purchases and Supplies,"* supplement to *The Toledo City Journal*, March 3, 1928, p. 13.

It was estimated that similar accounting procedure cost New York City $1.30 per voucher in 1909,[14] and the cost is probably higher now on account of the increased salary levels.

Centralized purchasing, if properly administered, should result in a material decrease in the number of orders issued. A decrease in orders automatically decreases the accounting task in encumbering appropriations. It should also, *ipso facto*, decrease the number of invoices to be checked, vouchers to be prepared, and warrants to be issued. This affords a further powerful argument for the adoption and practice of centralized purchasing in government.

[14] F. X. A. Purcell, *Purchasing for Large Cities*, p. 29.

APPENDICES

APPENDIX A

SAVINGS OF CENTRALIZED PURCHASING, PITTSBURGH, PA.

COMPARISON of prices paid in Pittsburgh, Pennsylvania, for 187 articles in 1910 through the central purchasing office with prices paid by the individual departments, buying independently, in the preceding year. It will be noted that in a few instances the purchasing office effected little if any saving; but in the majority of instances the price reduction is impressive.

Article	*Price, Centralized Purchasing, 1910*	*Price, Decentralized Purchasing, 1909*
Acid, sulphuric	$ .01¾ lb.	$ .03½ lb.
Ammonia, anhydrous	.25 lb.	.26 lb.
Ammoniated mercury	1.10 lb.	1.50 lb.
Arms, cross, 6-in., 6 pins	.24 ea.	.42½ ea.
Axes, pole	4.90 doz.	8.50 doz.
Bags, feed, leather bottom	14.00 doz.	15.00 doz.
Baked beans, can	.85 doz.	.95 doz.
Bamboo, split	.03¼ lb.	.03¼ lb.
Barley	.02½ lb.	.03 lb.
Baskets, bushel	2.75 doz.	3.15 doz.
Baskets, single handle	.30 doz.	.34 doz.
Batteries, Columbia	.18 ea.	.19 ea. .35 ea. .45 ea.
Beans, Lima	.05½ lb.	.06 lb.
Beans, navy	.04 lb.	.04⅛ lb.
Blades, hack saw	.42 doz.	.70 doz.
Blankets, for hospital	2.00 pr.	3.49 pr.
Blankets, stable	24.00 doz.	45.00 doz.
Bolts, machine, ⅝"x5", sq. head	1.90 C	1.91 C
Bolts, machine, ⅝"x1½", sq. head	.89 C	1.01 C
Brick, Benezet, fire, 9-in.	32.00 M	50.00 M

Article	*Price, Centralized Purchasing, 1910*	*Price, Decentralized Purchasing, 1909*
Bricks, hard red	6.25 M	7.95 M
Brushes, mane	3.50 doz.	3.75 doz.
Brushes, mane root	1.75 doz.	1.90 doz.
Brushes, scrub	.80 doz.	.90 doz.
Buckets, galvanized, 12-qt.	1.75 doz.	2.95 doz.
Buckets, galvanized, 14-qt.	2.00 doz.	2.95 doz.
Buckets, sewer drop	27.00 doz.	27.00 doz.
Calcium chloride	.01 lb.	.08 lb.
Calico, blue	.08½ yd.	.08½ yd.
Candles, plumbers'	.14 lb.	.15 lb.
Carts, patrol	8.38 ea.	11.00 ea.
Chairs, bunk room	2.70 ea.	2.75 ea.
Chairs, engine room	4.15 ea.	4.50 ea.
Chest, ice, No. 5 Alaska	13.25 ea.	13.75 ea.
Cheviot	.12½ yd.	.12½ yd.
Chloroform	.35 lb.	.45 lb.
Cloth, cheese	.03 yd.	.03½ yd.
Collars, No. 1 Irish	6.00 ea.	9.00 ea.
Combs, dressing	.70 doz.	.75 doz.
Combs, fine	.60 doz.	.65 doz.
Corn starch	.02¾ lb.	.03¾ lb.
Crackers, soda XXX	.06 lb.	.06¼ lb.
Creolol	.95 gal.	1.00 gal.
Cups, tin, 1-pt.	2.25 gross	4.20 gross
Cuspidors, enameled	3.75 doz.	5.85 doz.
Duck, cotton, 6-oz. white	.12½ yd.	.18 yd.
Fans, Emerson, 15-in.	15.75 ea.	27.50 ea.
Flannel, Canton, unbleached	.07 yd.	.08 yd.
Flannelette, white	.07½ yd.	.08¾ yd.
Forks, manure	9.00 doz.	9.00 doz.
Formaldehyde	.09½ lb.	.11 lb.
Gaiters, serge, women's	.72½ pr.	.72½ pr.
Gasoline, 76°	.16 gal.	.19 gal.
Gingham, blue and white	.05¾ yd.	.06¾ yd.
Glue, cabinet	.23 lb.	.33 lb.
Gram ammonia muriate, C. P.	.18 lb.	.25 lb.
Halters, 5-ring, 1-in. strap	21.00 doz.	24.00 doz.
Halters, day	3.50 ea.	4.00 ea.

Article	*Price, Centralized Purchasing, 1910*	*Price, Decentralized Purchasing, 1909*
Handles, hammer	.35 doz.	.50 doz.
Handles, hatchet	.75 doz.	.79 doz.
Handles, sledge	.83 doz.	.90 doz.
Hatchets, No. 4	.35 ea.	.42 ea.
Hooks, grass	2.75 doz.	3.00 doz.
Hose, women's, white	.70 doz.	.85 doz.
Hose, women's, white and gray	.67½ doz.	.85 doz.
Insulators, glass, 20-oz.	34.50 M	37.10 M
Jute	3.90 C	4.75 C
Knives and forks	.73 doz.	1.10 doz.
Lace, belt	.22½ sq. ft.	.25 sq. ft.
Lanterns, Dietz No. 2	4.25 doz.	6.00 doz.
Leather, oak sole	.31 lb.	.32 lb.
Lentils	.03 lb.	.04½ lb.
Linoleum, inlaid	1.08 yd.	1.30 yd.
Matches, Bird's Eye	3.35 gross	3.50 gross
Matches, safety	.50 gross	.50 gross
Metal, expanding	.022 sq. ft.	.022 sq. ft.
Methyl alcohol	.55 gal.	1.50 gal.
Mops, 18-oz.	2.90 doz.	2.90 doz.
Mops, 20-oz.	3.10 doz.	3.10 doz.
Mops, 24-oz.	3.60 doz.	3.65 doz.
Muslin, bleached, 42-in.	.09½ yd.	.09½ yd.
Muslin, bleached, 9-4	.21½ yd.	.22 yd.
Muslin pillow slips, 42-in.	.09½ yd.	.09½ yd.
Muslin, unbleached	.14 yd.	.14 yd.
Nails	1.85 keg	2.00 keg
Nets, fly	3.50 ea.	5.75 ea.
Ochre, yellow, in oil	.05½ lb.	.05½ lb.
Oil, castor	1.00 gal.	2.00 gal.
Oil, Elaine	.13½ gal.	.16 gal.
Oil, neatsfoot	.56 gal.	1.25 gal.
Overall blouses	4.87½ doz.	8.40 doz.
Overall pants	4.87½ doz.	10.20 doz.
Oxide of iron, for paint	.65 gal.	.90 gal.
Packing, flax	.27½ lb.	.40 lb.
Packing, Gem, flax	.30 lb.	.30 lb.
Packing, Palmetto, 11/16"-½"	.53 lb.	.75 lb.

Article	*Price, Centralized Purchasing, 1910*	*Price, Decentralized Purchasing, 1909*
Packing, square oiled, flax	.30 lb.	.30 lb.
Padlocks	.60 ea.	.60 ea.
Paint, red iron	.45 gal.	.48 gal.
Paper, roofing	.52 roll	.65 roll
Paper, roofing, 2-ply	.43 roll	.65 roll
Paregoric	.28 lb.	.75 lb.
Peaches	.07½ lb.	.08 lb.
Peaches, can	1.60 doz.	1.65 doz.
Pears, can	1.90 doz.	1.95 doz.
Peas, can	.65 doz.	.84 doz.
Phosphate, sodium	.03⅝ lb.	.04½ lb.
Pins, grade, 1″x1″x18″	1.45 C	1.45 C
Pipe, lead, ⅝-in.	5.32 C	6.00 C
Plates, dinner	.65 doz.	.65 doz.
Poles, 7 in. x 14 in., 35 ft.	6.75 ea.	7.00 ea.
Poles, 7 in. x 14 in., 40 ft.	8.65 ea.	8.75 ea.
Poles, pike	1.44 ea.	1.60 ea.
Polish, Duquesne	.14 lb.	.15 lb.
Polish, Solarine	.98 gal.	1.02 gal.
Polish, Winterton	.17¼ lb.	.21 lb.
Posts, locust	.47 ea.	.60 ea.
Prunes, 40's	.07 lb.	.08 lb.
Putty	.018 lb.	.02 lb.
Rakes, asphalt	11.00 doz.	11.75 doz.
Rice	.04 lb.	.05 lb.
Rivets, all sizes	.02¾ lb.	.05 lb.
Rope	.08¾ lb.	.10 lb.
Rugs, 3′x6′	2.85 ea.	4.25 ea.
Saddles, McClelland	242.00 doz.	300.00 doz.
Salmon	.08 lb.	.11½ lb.
Salt	.90 bbl.	1.05 bbl.
Savagram	.07 lb.	.07 lb.
Saws, Disston, 26-in.	1.10 ea.	1.22 ea.
Saws, rip	1.30 ea.	1.40 ea.
Seed, canary	.03½ lb.	.05 lb.
Seed, hemp	.04 lb.	.05 lb.
Seed, lawn	1.75 bu.	2.00 bu.
Seed, sunflower	.04¾ lb.	.05 lb.

Article	*Price, Centralized Purchasing, 1910*	*Price, Decentralized Purchasing, 1909*
Shavings, baled	5.19 ton	8.90 ton
Shawls, shoulder	5.00 doz.	6.60 doz.
Sheets, bed	5.75 doz.	6.00 doz.
Shoes, felt sole	.90 pr.	1.50 pr.
Shoes, men's	1.10 pr.	1.45 pr.
Shoes, women's	1.00 pr.	1.48 pr.
Signs, street, 20"x24"	.28 ea.	.32 to .60
Slippers	.67½ pr.	.85 pr.
Slips, bolster	2.00 doz.	3.12 doz.
Slips, pillow	1.15 doz.	1.68 doz.
Snaps, harness, 2-in.	1.25 doz.	1.35 doz.
Soap, American Family	3.30 box	3.85 box
Soap, Gold Dust	4.50 case	4.50 case
Soap, Ivory	6.60 box	6.65 box
Soap, laundry	3.00 box	3.85 box
Soap, linseed oil	.04½ lb.	.05 lb.
Soap powder	.03 lb.	.04 lb.
Soap, Walker's	3.85 box	3.85 box
Soap, white castile	.12 lb.	.15 lb.
Soapine	3.80 box	3.90 box
Soda, sal	.75 C	.90 C
Stove, Olive gas	14.00 ea.	15.25 ea.
Sugar, granulated	5.10 C	5.10 C
Syrup, corn	.23½ gal.	.27 gal.
Syrup, Squibb's compound	.35 lb.	.60 lb.
Tablets, Asafetida, gr. 3, Mulford	.84 M	1.02 M
Tablets, bismuth, subnit., gr. 5, Mulford	2.40 M	4.12 M
Tablets, cascara compound, Wyeth Bros., 5 gr.	1.18 M	2.00 M
Tablets, cough, Wyeth Bros.	1.00 M	1.40 M
Tablets, soda salicylate, Mulford	.76 M	1.06 M
Tablets, tincture digitalis, M5, Mulford	.40 M	.59 M
T. A. drawing pens, imported	1.12 ea.	1.20 ea.
Tape, Chesterman, 50-ft.	4.25 ea.	4.50 ea.
Tape, Lufkin's, 50-ft.	1.60 ea.	2.00 ea.
Tape, Manson	.65 ea.	.65 ea.
Tar, roofing	5.10 bbl.	6.00 bbl.
Ticking, 32-in.	.10 yd.	.13½ yd.

Article	*Price, Centralized Purchasing, 1910*	*Price, Decentralized Purchasing, 1909*
Tobacco, Weyman's	.31 lb.	.31¾ lb.
Tomatoes, can	.60 doz.	.80 doz.
Toweling, white linen	.07½ yd.	.07½ yd.
Towels, hand	.90 doz.	1.25 doz.
Towels, roller	2.70 doz.	4.00 doz.
Triangle, celluloid, 4-in.	.15 ea.	.15 ea.
Triangle, celluloid, 6-in.	.17 ea.	.21 ea.
Triangle, celluloid, 8-in.	.21 ea.	.28 ea.
Triangle, celluloid, 18-in.	1.25 ea.	1.62 ea.
Tripoli	.01¾ lb.	.02½ lb.
Typewriter, Underwood	92.25 ea.	99.00 ea.
Valves, Jenkins globe, ¾-in.	.90 ea.	.95 ea.
Valves, Jenkins globe, 1¼-in.	1.80 ea.	1.80 ea.
Valves, Jenkins globe, 1½-in.	2.48 ea.	2.50 ea.
Valves, Jenkins globe, 2-in.	1.44 ea.	2.39 ea.
Valves, Jenkins globe, 2½-in.	1.98 ea.	4.25 ea.

APPENDIX B

RECOMMENDED AND EXISTING LAWS ON PURCHASING

I.—Recommended General Law for Counties

The following bill was drafted by the writer in collaboration with the Ohio State Committee on Centralized Purchasing. It was introduced to the 1927 session of the Ohio general assembly, but failed of passage. It outlines the essential provisions of a general county purchasing plan which permits local formulation of the detailed procedure.

A BILL

To supplement section 2413 by the enactment of sections 2413-1 to 2413-5, inclusive, and to repeal sections 2850 and 2997 of the General Code, relative to a centralized purchasing agency for county offices.

Be it enacted by the General Assembly of the State of Ohio:

Section 1. That section 2413 be supplemented by the enactment of supplemental sections 2413-1 to 2413-5, inclusive, to read as follows:

Sec. 2413-1. The county commissioners, acting as a board, shall have authority to appoint a county purchasing agent and such assistants as are deemed necessary, to fix their compensation, and to remove them at any time for cause affecting the performances of their duties. The county purchasing agent shall be an elector of the state of Ohio and shall have had, prior to his appointment, practical purchasing experience of not less than one year in a public or private purchasing agency except in counties wherein the budget for supplies, foods, materials and equipment is $100,000 or less. The county purchasing agent shall give such bond and subscribe to such oath as the board of county commissioners may prescribe in accordance with existing laws.

Sec. 2413-2. The county purchasing agent shall have authority, in accordance with rules and regulations prescribed by the board of county commissioners:

(a) To procure by purchase or contract upon receipt of formal requisitions, properly approved, all supplies, foods, materials, and equipment of every kind used and needed for use by all county officers and offices, departments and institutions, excepting the feeding of prisoners in county jails, hereinafter referred to as the using agencies.

(b) To supervise and have control over any storeroom or warehouse which may be provided by the board of county commissioners for storage of supplies, foods, materials, and equipment purchased in anticipation of need, and upon receipt of formal requisitions properly approved, to distribute such stock to requisitioning agencies of the county.

(c) To transfer between any two or more using agencies any supplies, foods, materials and equipment not immediately needed by one but essential to the operation of the other, and to dispose of by sale to highest bidder after sealed bids have been received and opened at a specified hour and date, any supplies, foods, materials or equipment which is declared by the county commissioners to be no longer of use to the county.

(d) To inspect or supervise the inspection of all deliveries of supplies, foods, materials or equipment; to order made any test deemed necessary to determine the quality of such supplies, foods, materials or equipment delivered; and to reject any or all of such supplies, foods, materials or equipment which do not meet specifications.

(e) To establish suitable specifications or standards of all supplies, foods, materials or equipment used and needed for use by any using agency of the county.

Sec. 2413-3. The head or other qualified authority of each using agency of the county shall submit to the county purchasing agent a detailed estimate of the requirements of his agency in supplies, foods, materials and equipment at such times and for such periods in advance as the board of county commissioners may prescribe. This shall in no wise prevent the head or other qualified authority of any using agency of the county from submitting to the county purchasing agent at any time a requisition or requisitions for any necessary supplies, foods, materials or equipment whose need was not foreseen when the aforesaid estimates of requirements were submitted.

Sec. 2413-4. All warrants or vouchers for supplies, foods, materials or equipment must bear the certificate in writing of the county purchasing agent that such supplies, foods, materials or equipment have been received in good condition and in accordance with specifications and prices stated in order or contract before such warrants or vouchers shall be passed by him to the county commissioners for approval.

Sec. 2413-5. No order or contract for supplies, foods, material or equipment, to be paid wholly or in part from county funds, shall be valid if placed or entered into otherwise than in accordance with this act. This act shall not conflict with the provisions in sections 2412-1, 2412-2, 2414, 2415, and 2419, or such other sections of the General Code prescribing the manner in which contracts are to be awarded by county commissioners.

Section 2. That sections 2850 and 2997 of the General Code be, and the same are hereby, repealed.

II.—City Laws

(a) San Francisco, California—Charter.—Centralized purchasing was established for the city and county of San Francisco by charter amendment adopted by referendum vote on November 7, 1922. The charter provisions adopted at that time were as follows:

ARTICLE II, CHAPTER IV

Section 1. A Bureau of Supplies is hereby created. The chief of the Bureau shall be a Purchaser of Supplies, to be appointed and salary fixed by ordinance of the Board of Supervisors. He shall give an official bond in such sum as may be fixed by said Board.

The Purchaser of Supplies may appoint, subject to the provisions of Article XIII of the Charter, such deputies and assistants as may be necessary when authorized by the Board of Supervisors, and their compensation shall be fixed by said Board; but present employees of the City and County exclusively performing duties as purchasers of supplies or as inspectors, custodians, commissaries or accountants thereof shall be transferred to this Bureau from the department where now employed, and such employees shall be deemed appointed to such positions within the provisions of Article XIII of the Charter and shall be entitled to all the benefits of said article thereafter.

Section 2. The Purchaser of Supplies shall have authority, and it shall be his duty, to purchase all the supplies of every kind and nature required by the several departments of the city government (except the Public Library) upon requisitions issued by such departments, and this provision shall supersede any provision to the contrary contained in this Charter; and it shall be the duty of the department to comply herewith. He shall have authority to sell personal property belonging to the City and County when authorized by a resolution of the Board of Supervisors.

Section 3. Notwithstanding the provisions contained in Chapter III of this article or in Section 9 of Chapter I of Article III, the Board of Supervisors shall by ordinance provide a method by which all supplies shall be purchased, the quantity thereof for which contracts may be made, which shall not exceed the estimated quantity required for one year, the period for which delivery of supplies may be made, which shall not be longer than one year, the security to be exacted for the entering into a contract and the faithful performance thereof, the supplies for which advertisement must first be made, the manner of receipt, inspection, distribution and accounting therefor. The Purchaser of Supplies shall have authority to sign contracts for supplies for future delivery and payment when the same does not exceed $1000; in other cases jointly with the head of the department requisitioning the same.

Section 4. Section 4 of Chapter III of this Charter shall be held applicable to all purchases and contracts made under the provisions of this chapter.

(b) San Francisco, California—Ordinance.—In pursuance of the authority granted by the charter as reprinted above, the board of supervisors of the city and county of San Francisco enacted the following ordinance on May 17, 1923. This ordinance prescribes what is believed to be the most up-to-date and practicable city purchasing system in existence.

Bill No. 6320, Ordinance No. 5880 (New Series).

Providing for the organization of the Bureau of Supplies created by Chapter IV, Article II of the Charter, appointing a Purchaser of Supplies and fixing his salary, and providing a method by which the supplies shall be purchased and the manner of contracting therefor.

Be it ordained by the people of the City and County of San Francisco as follows:

Section 1. Pursuant to the provisions of Chapter IV of Article II of the Charter of the City and County of San Francisco, a Bureau of Supplies is hereby created and Leonard S. Leavy is hereby appointed Purchaser of Supplies. He shall receive a salary of ten thousand dollars ($10,000) a year, payable in equal monthly installments. He shall give an official bond, to be approved by the Mayor, in the sum of twenty thousand dollars ($20,000).

Section 2. He shall submit to the Civil Service Commission the names of all employees of the City and County who, on the creation of the Bureau, were exclusively performing duties as purchasers of supplies or as inspectors, custodians, commissaries or accountants thereof, in order that the Civil Service Commission may investigate and determine as to whether the persons so named are entitled to be transferred to the Bureau and to be deemed appointed to such positions within the provisions of Article XIII of the Charter, as provided by Chapter IV, Article II of the Charter, and at the same time he shall recommend to the Civil Service Commission any changes in titles of such positions as he may think necessary. He shall also recommend to the Board of Supervisors a list of any additional positions that he deems necessary to be established in the Bureau by ordinance, stating in detail the duties of each position and suggesting, for the guidance of the Board of Supervisors and the Civil Service Commission, a suitable designation for each position and the salary thereof.

Section 3. All departments shall file such estimates of materials, supplies and equipment at such times and in such manner as shall be

determined upon by the Purchaser of Supplies. All purchases shall be made by the Purchaser of Supplies on requisition of the department desiring the same, except that for materials, supplies and equipment in common use by more than one department, or used in large quantities by a department, the Purchaser of Supplies may purchase for stock on the basis of the total of such requisitions or estimates previously filed.

All purchases in the open market, except for patented or proprietary articles and except for minor amounts, and except for fresh fruits and vegetables, shall be based on at least three quotations. The Purchaser of Supplies shall keep a record of such quotations and a register of all informal awards. All articles defined as "patented" or "proprietary" articles for which bids shall not be required shall be listed and filed with the Board of Supervisors and the Auditor.

The Purchaser of Supplies, in cooperation with the officials of the several departments, shall provide for the standardization of materials, supplies and equipment in accordance with the use to which the various articles are to be put, and shall provide for adequate specifications for materials, supplies and equipment used in large quantities, or in common use by more than one department.

Section 4. The Purchaser of Supplies is hereby authorized to enter into all contracts and sign all Purchase Orders for materials, supplies and equipment, provided that any contract shall first be awarded by the Board of Supervisors upon recommendation of the Supplies Committee, and notice of such award shall be published. Any contract calling for an expenditure in excess of one thousand dollars ($1,000) must also be entered into jointly with the department making the original request. Provided, however, that all contracts or purchase orders shall only be made with the lowest responsible bidder, quality of the product offered and delivery to be considered; and provided further that if the Purchaser of Supplies believes the public interest would be subserved by accepting other than the lowest bid, the reasons for accepting such higher bid shall be submitted in writing as a part of the award and a copy thereof filed with the Auditor; and provided, further, that no award shall be made to any bidder, other than the lowest bidder, except in consideration of deliveries or on account of the quality of the article or articles offered, to be determined by such tests as may be required or recommended by the Purchaser of Supplies.

The Purchaser of Supplies may, with the approval of the Board of Supervisors, reject any and all bids, or the bid for any one or more articles embraced, when the public interest will be subserved thereby.

When the Board of Public Works is engaged in the construction of a public utility and the City Engineer reports that an emergency exists

which requires the immediate purchase of materials, supplies or equipment for use in such construction, then the Purchaser of Supplies, upon the written request of the Board of Public Works, is authorized to forthwith purchase such materials, supplies or equipment in the open market at the lowest obtainable price.

Section 5. The Purchaser of Supplies shall call for sealed competitive bids for all purchases which are to be based on a written contract. All purchases in excess of one thousand dollars ($1,000) shall be based on written contract, except in case of an emergency actually existing by reason of extraordinary conditions or contingencies that could not be reasonably foreseen or guarded against, or unusual trade or market conditions, as may be determined by the Purchaser of Supplies upon recommendation of the department affected, and with the approval of the Chairman of the Supplies Committee.

Where no bid is received or where all bids received are for the same total amount or unit price, the Purchaser of Supplies may purchase the commodities called for in the open market, provided, however, that the price paid in the open market shall not exceed any bid price received for the same commodities.

All proposals calling for sealed competitive bids under the conditions of this section shall require each bid to be accompanied by a certified check or certificate of deposit on a solvent bank in the City and County of San Francisco, in such sum as may be specified therein by the Purchaser of Supplies and payable at sight to his order. Before the execution of any contract, the Purchaser of Supplies shall require the successful bidder to file a bond with good and sufficient sureties for the faithful performance of the contract, in a sum not less than twenty-five per cent (25%) of the aggregate award. If the bidder to whom the contract is awarded under the provisions of this section shall for ten (10) days after such award fail or neglect to enter into the contract and file the required bond, the Purchaser of Supplies shall draw the money due on such certificate of deposit or check and pay the same into the treasury; and under no circumstances shall the certificate of deposit or certified check be returned to such defaulting bidder.

All bids shall be sealed and delivered by the bidder to the Clerk of the Board of Supervisors, and shall be opened by the Board at an hour and place to be stated in the advertisement for proposals in the presence of all bidders who attend. Bidders may inspect the bids after reference to and tabulation by the Bureau of Supplies. All bids with alterations or erasures therein shall be rejected. When specifications do not include alternative proposals, the statements or communications accompanying bids, which serve to qualify such bids, shall not be con-

sidered in making awards. All articles supplied shall be subject to inspection and rejection by the Purchaser of Supplies or any department official or subordinate charged with such duty, or by both.

Any contractor who fails to live up to the terms of his contract for the delivery of materials, supplies or equipment, may, upon the joint action of the head of the department and the Purchaser of Supplies, be declared an irresponsible contractor and shall not, for a period of one (1) year thereafter, be awarded any further contract for furnishing such materials, supplies or equipment to any department of the City unless the Board of Supervisors shall by a two-thirds vote remove such disqualification.

Section 6. Notices inviting sealed competitive bids under the conditions of the preceding section and calling for an expenditure in excess of one thousand ($1,000) dollars, must be published for at least two (2) days in the official paper and at least five (5) calendar days must intervene between the date of last publication and the time for filing such sealed bids, or proposals. It shall not be necessary for such notices to state other than in general terms the conditions of the proposed award.

Section 7. In case of emergency, departments may make emergency purchases with the consent of, and in accordance with the rules established by the Purchaser of Supplies, but no such purchase shall be in greater amount than twenty-five dollars ($25.00).

Section 8. The Purchaser of Supplies shall require monthly reports of stores on hand in the various departments and bureaus, and may fill orders of one department or bureau by the transfer of surplus stores of another department or bureau, and shall make proper accounting of the values so transferred.

The Purchaser of Supplies may provide for the creation of a store, or stores, to be under his general direction, supervision and control. Materials, supplies and equipment placed in the store, or stores, so created as the Purchaser of Supplies may determine, shall be issued therefrom to departments on requisition, and whenever so furnished, shall be charged to the department to which issued or delivered by transfer to the credit of the store's appropriation. No stationery furnished by the Purchaser of Supplies to any officer or department shall contain the name, or names, of the officer, or officers, constituting the head of the department or board.

Section 9. The Purchaser of Supplies shall establish all rules and regulations necessary to the purpose of this ordinance and shall from time to time recommend to the Supervisors such additional measures as he shall deem expedient and the Supervisors may adopt such recommendations by ordinance.

Section 10. The Purchaser of Supplies shall have authority to pre-

scribe tests for the determination of the quality of all proposed purchases, or deliveries, when such quality can be accurately determined by tests. He shall have authority, through the executive head of the department in charge thereof, to require the use of laboratory facilities of the city and the technical staffs thereof for such testing of samples of proposed purchases or deliveries. Bills to cover the cost of such testing, when approved by the Purchaser of Supplies, shall be paid out of the fund of the department for whose use the materials, supplies or equipment is delivered, or is proposed to be purchased.

(c) Milwaukee, Wisconsin—State Law.—Centralized purchasing was established in Milwaukee by state law applying to first-class cities. The law creating the present central board of purchases is reprinted below:

CHAPTER 297, LAWS OF 1917

AN ACT to create section 926-32 of the statutes relating to central purchasing in the cities of the first class.

The people of the State of Wisconsin, represented in the senate and assembly, do enact as follows:

Section 1. There is added to the statutes a new section to read:

Section 926-32. 1. In all cities of the first class, whether incorporated under special charter or under general law, there is hereby created a Central Board of Purchases.

2. This board shall be composed of the mayor, two aldermen to be selected by the Common Council, the commissioner of public works, the responsible administrative official of each of the following boards and commissions to be designated by the board or commission which he represents: the sewerage commission, the board of school directors, the public library board, the public museum board, the board of park commissioners and the officers, boards and commissions corresponding thereto.

3. Each member shall have one vote. The mayor shall be chairman of the board and shall call all meetings. If the mayor shall fail to call a meeting of the board on the written request of any member of the board, a majority of the membership may call a meeting. Five members shall constitute a quorum.

4. The Central Board of Purchases shall organize a department of purchases and they shall appoint and remove, fix the duties, and except as hereinafter provided, determine the fitness and salaries of such employees as shall be necessary to administer the affairs of the department of purchases. Provided that all employees whose duties are solely clerical in character shall be subject to civil service rules, and if the Common Council of such city shall have fixed standard rates of pay for such em-

ployees, said employees shall receive the same standard rates of pay as may be provided by the Common Council for such service.

5. The Common Council shall appropriate annually in the budget a sum sufficient to carry on the activities of the department of purchases. This shall not, however, prevent the appropriation of funds by other proper appropriating officials for the operation of the department of purchases.

6. The Board of Purchases shall have full power to purchase or to provide for the purchase of all materials, supplies and equipment for the use of all departments, boards or commissions comprising the city government. Such purchases shall be made upon requisition by the proper officials of said boards, commissions or departments from funds provided by the proper appropriating official. Providing that nothing in this act shall be construed to prevent the Central Board of Purchases or their agents from making purchases or contracts in anticipation of the needs of departments, boards and commissions or from maintaining in stores, commodities in anticipation of needs, and providing further that any board or commission may, by agreement with the Central Board of Purchases, purchase independently such articles of a special character as are used only by it, or which may be decided, by agreement with the Central Board of Purchases, may be more advantageously purchased by any such board or commission than by the department of purchases. This power and authority of the Central Board of Purchases shall not be construed to include contracts for public works where materials, supplies or equipment are furnished by the contractor as part of the requirements of his contract.

All such materials, supplies and equipment, except as otherwise provided herein, when the estimated cost thereof shall exceed $1,000, shall be purchased by formal contract from the lowest responsible bidder, after due notice inviting proposals. Such notice shall be published in at least one official paper for at least six days preceding the last day set for the receipt of proposals. Except as hereinafter provided, where the nature of the purchase is such that it is in their judgment to the best interests of the city, the Central Board of Purchases may authorize purchases in excess of $1,000 value, without complying with the foregoing provisions. The reasons for dispensing with formal contract provisions shall be set forth in the minutes of the Central Board of Purchases and shall be a matter of public record. When the proportion of any such proposed purchase which is to be charged to those departments under the control of the common council shall exceed $1000, such purchase shall be made by formal contract from the lowest responsible bidder, unless the common council shall, by two-thirds vote of the members elect, authorize such purchases without the intervention of a formal contract. The Central Board

of Purchases shall have power to let contracts in excess of funds available, provided that each contract shall state in substance that its continuance beyond the limits of funds already available shall be contingent upon the appropriation of funds by the proper city officials. All contracts shall run to the city of Milwaukee and shall be countersigned by the comptroller, who shall state thereon whether or not funds are available to make payment in full for the amount of the contract and to what extent the continuance of the contract is contingent upon the appropriation of additional funds, by proper city officials. The Central Board of Purchases shall have power to require of bidders and contractors such sureties as in their judgment are advisable and shall have power to decide as to the responsibility and competency of such bidders and sureties.

7. The Central Board of Purchases shall have power and authority to call upon any officer, board or commission to furnish information or otherwise assist them in the performance of their duties, and it shall be the duty of any such officer, board or commission to furnish such information or assistance as shall be within the scope of such officer, board or commission.

Section 2. All acts or parts of acts in conflict with this act are hereby repealed.

Section 3. This act shall take effect upon passage and publication. Approved May 28, 1917.

(d) Milwaukee, Wisconsin—By-Laws and Rules of Procedure.—The central board of purchases, created by the law reprinted above, adopts, and amends from time to time, rules of procedure to govern the methods of purchasing for the city. The latest by-laws, which became effective February 1, 1926, are reprinted below. They represent the highest type of administrative law on purchasing.

BY-LAWS AND RULES OF PROCEDURE

OFFICERS

1. The Mayor of the City of Milwaukee shall be ex officio chairman of the Central Board of Purchases.
2. The Central Board of Purchases shall elect a vice-chairman who will preside and have the powers of the chairman during his absence. He shall hold office for one year.
3. The Board shall elect each year a secretary who may or may not be a member of the Board. In the absence of the secretary, the Board shall elect an acting secretary who shall serve as such, at the meeting at which he was elected.
4. Election of officers shall be held on the first meeting following May 1st.

DUTIES OF OFFICERS

1. The chairman shall act as presiding officer and shall have power to make decisions as to general policy pending the subsequent ratification of the Board.
2. The secretary shall keep the minutes of the Central Board of Purchases, shall notify all members of meetings at least twenty-four hours theretofore, and shall advise with the purchasing agent.
3. The purchasing agent shall be the chief administrative officer of the Department of Purchases. He shall make all purchases for all departments having their executive offices in the City Hall with the exception of the Sewerage Commission and Board of Park Commissioners. As rapidly as any class of supplies or materials shall become standardized and it is deemed advisable to purchase on contract or continuing agreement, he shall make such agreement pursuant with the consent or direction of the Board against which the various departments, whether buying all supplies through him or not, shall order. The purchasing agent shall appoint all members of the staff of the Department of Purchases and shall recommend to the Central Board of Purchases the salaries to be paid. He shall sign, or designate the person to sign, all purchase orders for amounts less than $1,000, and shall have power to purchase supplies, materials and equipment for use of the Central Department of Purchases within the limits of the budget provided.

On January 30, 1924, the chairman of the purchasing board appointed a standing executive committee for the purpose of considering proposals and bids, making recommendations to the purchasing board, and acting in an advisory capacity to the chief buyer. This committee also acts in an executive capacity when directed by the purchasing board.

SALARIES OF EMPLOYEES

The salaries of all employees of the Central Board of Purchases shall be fixed by salary resolutions. All salaries for subordinate employees shall be recommended by the purchasing agent.

PURCHASING PROCEDURE

1. All contracts or agreements involving purchases of items over $1,000 in value shall be made by the Central Board of Purchases and shall be signed by the purchasing agent and approved by the chairman of the Board.
2. All formal bids shall be opened by the purchasing agent in the presence of at least two members of the Central Board of Purchases.

3. No contracts for the purchase of articles, whether by contract or by direct order of the purchasing agent excepting for stores, shall be made except upon the requisition or notification from a department that the supplies are to be needed.
4. A copy of all advertisements or calls for bids shall be submitted when issued to the members of the Board, and a schedule of all bids shall be submitted to the Central Board of Purchases.
5. It is declared to be the policy of this Board to discourage so far as practicable any procedure other than that of purchasing by competitive bids, either formal or informal.
6. No splitting of orders as an evasion of the procedure prescribed by law and by these rules is permitted.
7. Each department placing any kind of requisition with the Purchasing Board is required to specify in full at the time of placing the requisition the goods or commodity desired in such terms as to make all specifications as open as possible in order to permit open bidding, and every effort must be made in drawing specifications and otherwise, to leave the competition actually open to as large a number of bidders as possible.
8. Where haste or other reason renders it necessary to proceed without fully advertised formal competitive bids, and the amount involved is above $250—
   (a) Specifications full and definite must be nevertheless prepared and filed in the office of the purchasing agent.
   (b) Full opportunity is to be granted to all possible bidders to bid.
   (c) All bids are required to be in writing, sealed, and presented before a definitely stated time.
   (d) All such bids are to be opened as soon as possible after such stated time in the presence of at least one member of the Purchasing Board.
   (e) There are to be no private modifications or variations either as to the specifications or requirements or as to the amounts of the bids.
   (f) Such bids shall be considered final unless rejected by the Board, and in no case shall any employee of the Board use any such bid or quotation for the purpose of bargaining with any bidder or dealer.
   (g) No employee of the Board is permitted to favor any particular individual or firm with orders or to give those submitting bids or quotations information which will give one any advantage over others seeking city business. So far as possible all communications with, and information to, those interested must be

in writing so that similar information can be furnished to others inquiring.

(h) Full consideration must be given to both the quality of the commodity and to any standards which have been adopted by the Board or by the department requisitioning commodities with the approval of the Board, but other considerations being equal, the lowest bid in any competitive bidding shall be accepted.

9. The purchasing agent is hereby given opportunity to take advantage of special conditions without even informal competition if an emergency actually arises in which the interests of the city demand such action, and such procedure can be invoked without violation of the statute. In such case, however, it is the fixed rule that within 24 hours thereafter the purchasing agent shall report the purchase in writing to the chairman of the Board with a definite statement of the reasons for such emergency purchase. A copy of such report shall be kept in the files of the purchasing department.

10. At each monthly meeting the purchasing agent shall give an itemized statement of all purchases which have been made without formal contract (meaning one entered into after official advertisement for bids), subsequent to the preceding meeting, and stating also the nature of such competition as has been secured in each such case. If any purchase has been made without competition as provided in paragraph 8, the purchasing agent shall give a summary of the reasons why such competition could not be secured.

11. Whenever the adoption of a standard type of an article to be purchased shall be followed by excessive or unreasonable prices, it is declared to be the policy of the Board promptly to abandon such type or standards to the end that competition may be established and reasonable prices obtained.

12. The purchasing agent is requested to prepare for the use of the members of the Board, and in advance of each meeting, a schedule of the items to come up for consideration at such meeting, including in connection with each item a brief summarization of the information necessary to intelligent action, and including also the recommendation of the purchasing agent, and the recommendation of the department heads or other interested officials as to the action to be taken by the Board upon such items.

REQUISITIONS

1. Each department shall issue a monthly requisition upon the department of Purchases which shall include all standard supplies to be required for the next thirty days.

2. All requisitions shall be filed seven days, at least, before the time at which they will be needed.
3. Only special items shall be purchased on emergency order upon written signature of the head of the department or bureau.

STOREHOUSE POLICIES

1. No new items not regularly carried in stock shall be purchased without authorization from the Purchasing Board.
2. No old stock shall be sold or traded to outside concerns without authorization from the Purchasing Board and Common Council.
3. All articles except seasonal supplies which do not turn over at least once every three months shall be discontinued.
4. The purchasing agent shall refer to the control record cards frequently, to prevent any accumulation of dead stock.
5. A constant effort shall be made by the storekeeper to dispose of old and slow-moving stock to city departments.

MEETINGS

1. The regular meeting of the Central Board of Purchases will be held at 10:30 A. M. on the last Wednesday of each month. Special meetings will be held at the call of the chairman or at the request of any two members.
2. The purchasing agent and secretary shall prepare reports of business transacted during the months and present them to the board at each monthly meeting.

AMENDMENTS

1. Amendments shall be presented in writing at a regular meeting of the Central Board of Purchases and a copy sent to each member of said Board, and shall not be acted upon until the next following regular meeting.
2. Majority vote of all members present at a meeting of the Board shall be sufficient to pass all amendments to these By-Laws and Rules of Procedure.
3. Robert's rules of order shall govern when there is no conflict with the law creating the Board or the rules and regulations governing this Board.

BRANCH PURCHASING BUREAUS

1. All purchase orders issued to any vendors, whether against a contract or on an original order, will bear the uniform stamp of the Central Board of Purchases designating which branch the purchase is for.

The person under whose direction the purchase is made for this branch will sign his name in the space provided.

2. The following branch purchasing agents are hereby temporarily appointed:
   Sewerage Commission—Mr. T. Chalkley Hatton, Buyer.
   Board of School Directors—Mr. Albert Schroeder, Buyer.
   Public Museum Board—Dr. S. A. Barrett, Buyer.
   Public Library Board—Mr. M. S. Dudgeon, Buyer.
   Continuation Schools—Mr. Robert L. Cooley, Buyer.
   Park Board—Mr. Frank Schumacher, Buyer.
3. It seems to be agreed by all that every board or commission represented upon the Board of Purchases, as well as other independent boards and commissions, should be willing to purchase as much of their equipment, material, supplies, etc. from the Board of Purchases as can be so purchased promptly, intelligently, and providently.
4. It is conceded that some special articles cannot be so purchased, such as plants, exhibits, books, scientific materials, and many other articles special to certain department.
5. It seems to the Committee that every such independent board and commission could, however, cooperate in centralizing purchases as follows:
   (a) If each board or commission would submit to the secretary of the Board of Purchases a list of equipment, material and supplies, which they have purchased over a given period, say six months, this list could be checked over by the secretary of the Board of Purchases and the representative of the independent board or commission, and an agreement could be reached as to which sort of items the Board of Purchases could secure efficiency for the independent board or commission. Thereafter all items designated as wisely purchasable through the Central Board should be purchased through that agency.
   (b) Inasmuch as there is on each independent board and commission some person selected to make the purchases who functions as a special purchasing agent for the Board of Purchases, it would seem to be wise, in order that this relationship to the Board might be real and actual, that at the end of each month a summary of the purchases made by this special purchasing agent, whether through the Board or otherwise, be filed with the secretary of the Board of Purchases; such a list need not, of course, constitute fully itemized inventories, but it might simply indicate that certain purchases were made of certain dealers, of articles characterized generally, for which a certain amount was paid. The articles purchased directly should be separated from those purchased through the

Board, the statement indicating what articles were purchased without competition. This list would correspond to the list of vouchers issued for the payment of these items, except that for each transaction there would be a few words characterizing the general nature of the purchase. For example, this list might be:

Voucher Number	*Name*	*Commodity*	*Amount*
17647	American Book Co.	Books	$226.10
17775	Librarian of Congress	Catalogue cards	46.00
17776	Standard Paper Co.	Cloth board for bindery	131.67
17785	Gaylord Bros.	Charging trays	39.20
17809	Wisconsin Ice & Coal Co.	Ice	8.88

The filing of such monthly report would be evidence that the independent board or commission maintained a close relationship with the Purchasing Board, and would centralize in the Purchasing Board a record of the purchases, without which centralization of records the Board of Purchases could hardly be characterized as a Central Board of Purchases.

6. It is assumed that each special purchasing agent will follow the purchasing procedure prescribed by the Central Board of Purchases wherever practicable.
7. The committee further recommends that as rapidly as any class of supplies or materials shall become standardized, and it becomes advisable to purchase this commodity through the Central Board of Purchases, such procedure shall be promptly invoked by the various boards and commissions. This plan of reporting became effective and operative on February 1, 1926.

(e) Model Charter Provisions.—The National Municipal League recommends the following charter provisions on purchasing, as a part of its *Model City Charter:*

Section 61. *Division of Purchases and Supplies.* There shall be in the department of finance a division of purchases and supplies, the head of which shall be the city purchasing agent. The purchasing agent shall make all purchases of supplies, materials and equipment for the city in the manner, and with such exceptions, as may be provided by ordinance, and shall, under such regulations as may be provided by ordinance, sell all real and personal property of the city not needed for public use or that may have become unsuitable for use. He shall also have charge of such

general storerooms and warehouses of the city as the council may by ordinance provide. Before making any purchase or sale the city purchasing agent shall give opportunity for competition under such rules and regulations, and with such exceptions, as the council may by ordinance provide.

APPENDIX C

SELECTION OF THE PURCHASING STAFF

1. Specifications and Examination Questions Prepared by Subcommittee on Purchasing of the Commission on Efficiency and Economy, Baltimore, Maryland.

(a) specifications for purchasing agent

Qualifications:—Education equivalent to that represented by graduation from a high school business course; graduation from a college or university of recognized standing, with a complete course in business administration preferred; successful and responsible administrative experience in purchasing work; a practical working knowledge of market conditions and practices, current prices, traffic procedure, storage and warehousing, and accounts; thorough familiarity with the best means of obtaining competitive and minimum quotations; knowledge of the law of contracts and contract procedure; resourcefulness; integrity; administrative ability; poise; and tact. Desirable age, 30 to 50 years.

Duties:—Under the direction of the mayor (or policy-forming board) to be responsible for the administration and the supervision of the city purchasing department; to receive and review requisitions and to prepare specifications; to invite proposals, examine bids, and to make awards; to negotiate contracts and to interview dealers and other agents; to investigate sources of supply and to maintain records pertaining thereto; to cooperate with department heads and bureau chiefs in standardizing materials and supplies; to establish standards; to maintain and supervise a storage warehouse; to keep necessary records and accounts, and to perform related work as required; to make all purchases for the city government; to keep posted in basic market conditions through reliable trade journals.

(b) specifications for assistant purchasing agent

Qualifications:—Education equivalent to that represented by graduation from a high school business course; successful and responsible experience in purchasing work, part of which time shall have been in a supervisory capacity; knowledge of market conditions and practices,

current prices, traffic procedure, storage and warehousing, and accounts; familiarity with the best means of obtaining competitive and minimum quotations; general knowledge of the law of contracts and contract procedure; resourcefulness; integrity; supervisory ability; and tact.

Duties:—Under general direction, to assist the purchasing agent in administering the work of the city purchasing department; to assist in receiving and reviewing requisitions and preparing specifications; to invite proposals, examine bids, and assist in making awards; to assist in negotiating contracts and in interviewing dealers and other agents; to investigate sources of supply and maintain records pertaining thereto; to assist in establishing standards; to supervise the clerical and accounting work of the department, and to perform related work as required; to keep posted in basic market conditions through reliable trade journals.

(c) EXAMINATION QUESTIONS FOR ASSISTANT PURCHASING AGENT

1. Write a paper of not more than 1500 words discussing a practical and economic system of making wholesale and retail purchases for local institutions.
2. State completely your conception of the purpose of the city purchasing department.
3. Discuss the relative advantages and disadvantages of contract buying and buying on the open market.
4. Point out and discuss the most important features of centralized purchasing of supplies and materials for the various agencies of the city government, or the various branches or departments of a large industry.
5. What is meant by market or business forecasting? How would you endeavor to forecast business conditions in your line?
6. Without a central warehouse, what means would you employ to keep in touch with orders placed and to insure prompt delivery of articles to the using authorities?
7. How would you keep the using departments posted on market conditions?
8. What advantages, if any, would city warehousing have?
9. What are the chief points to be noted in comparing bids from different firms for a given order?
10. In case of a dispute between the contractor and the city purchasing agent as to the quality of goods delivered, what would be the proper procedure?
11. Mention several causes for which the following would be rejected: coal; fire hose; meats; milk and cream; flour; lumber.
12. What are the advantages of standardization?

13. How can standardization be accomplished in connection with specifications?
14. What means are used by a purchasing department in determining sources of supply?
15. How would you establish with department heads the maximum and minimum stocks to be carried?

2. Examination Questions for Position of Purchasing Agent, Office of President of the Borough of Manhattan, New York City. Conducted by Municipal Civil Service Commission.

1. (a) Name two manufacturers of paints, varnishes, etc.
   (b) Name two manufacturers of electrical supplies and appliances.
   (c) Name two manufacturers of soap, soap-powder, etc.
   (d) Name four manufacturers of pneumatic tires (casings) for motor vehicles.
2. Criticise the following requisitions from the standpoint of definiteness or explicitness:
   (a) Thirty cast brass shower heads for Rivington Street public bath.
   (b) Four gross cotton twine mops.
   (c) 2,000 yards, approximately 60-yard bolts, cheesecloth.
   (d) 600 feet 1″ three-ply cold water hose.
3. and 4. Describe in detail the system of records, indexes, etc. maintained in the office of the purchasing agent, president of the borough of Manhattan.
5. Explain fully the nature of the aid that the following may, on occasion, render to the purchasing agent, president of the borough of Manhattan:
   (a) Testing laboratory, office of president of the borough of Manhattan.
   (b) Purchasing agents of other city departments or of outside business concerns.
6. Discuss the relative importance of "delivery" (ability of firm to deliver) as a factor to be weighed by a purchasing agent before placing an order for goods.
7. State the meaning of the following:
   (a) Brass wire 1,200 lbs. .016
   (b) Malleable.
   (c) Thermostat.
   (d) Diameter.
   (e) Multigraph.
   (f) Bituminous coal.

8. Name the various sources from which a purchasing agent may obtain lists of manufacturers and vendors.

9 and 10. As a purchasing agent, write a report of not less than two hundred words, to the Municipal Civil Service Commission, on the need and value of a comprehensive volume of standard specifications.

3. Examination Questions for Position of Buyer. Conducted by Civil Service Commission, Cleveland, Ohio.

1. Suppose that you are appointed to the position of buyer for the city of Cleveland or the board of education. The head of your department asks you to organize your day's work, making provision for each important duty, and to draw up for him a schedule of your time. Make such a time schedule.
2. (a) Name four manufacturers of auto tires.
   (b) Name two manufacturers of paints.
   (c) Name two dealers in chemical supplies.
   (d) Name two dealers in hardware supplies.
   (e) Name three dealers in vegetable produce.
   (f) Name three dealers in office furniture.
   (g) Name three dealers in stationery supplies.
   (h) Name two dealers in drafting supplies.
3. (a) What factors besides price should be taken into consideration in placing an order with a bidder? Give your reasons in full.
   (b) What records of vendors should a purchasing agent keep? Show how such records can be invaluable.
   (c) What papers, books and catalogues are useful to the buyer?
4. What are the units in which the following are usually bought: (a) iron pipe, (b) cement, (c) nails, (d) bituminous coal, (e) eggs, (f) carbon paper?
5. (a) What is indicated as to the general condition of the market by a high statistical index of mercantile stocks on hand? With a high index is it in general a good or a bad time to buy?
   (b) Discuss the relative importance of "delivery" (ability of a firm to deliver) as a factor to be weighed by a purchasing agent before placing an order for goods.
6. (a) How large an order may the purchasing agent (for the city or for the board of education) place at his own discretion?
   (b) What is the usual procedure with larger orders?
   (c) What procedure is followed with larger orders of "emergency" nature?
7. What types of supplies should be purchased on a time contract basis? For how long a time should these contracts run?

8. Suppose a contractor has applied to do a large amount of maintenance work. You are assigned to make a thorough investigation as to his financial standing, his ability, and his past work. What will you do?
9. Suppose that as a buyer you are expected to do your own follow-up work. What special records will you keep? How will you perform this work?
10. *Essay.* Write at some length discussing "hand-to-mouth" buying. What is the present tendency in industry with respect to this policy? What are its advantages and disadvantages? Do you consider it applicable to municipal purchasing?

Grade for this examination will be distributed as follows:

Written examination	40%
Oral examination	20%
Experience (from applications).....	40%
	100%

4. Examination Questions for Assistant Director of Purchase, New York State. Conducted by the State Civil Service Commission.

Time Allowed for the Examination: Five Hours.

1. Prepare a tabulation of the attached bids so that the director of purchase can decide to whom the order should be awarded without referring to anything except your tabulation and the samples. All matter printed in red has been inserted by the bidders.
2. On the tabulation prepared in answer to question 1, show by check mark the company to which you would award each item, assuming that samples 2, 11, 22, 23, and 25 are unsatisfactory as to quality, all other samples satisfactory; that the delivery offered by the Royal Paper Company is too late to be acceptable, all others satisfactory. Draw a line around items rejected because of unsatisfactory quality and delivery.
3. Write an order covering the award made by you to the company to which you have awarded the largest number of items as shown by your tabulation in question 1. Include all detailed information necessary to enable the supplier to make the delivery required, and to bill the material properly.

4. A paper manufacturer has on hand a surplus of high grade paper, the quantities and regular retail prices being as follows:

					Net Price Per Ream	*Net Total Price*
234	reams	8x10½	—2⅞	lbs.	$3.30 per ream	
268	"	"	3⅝	"	3.30 "	"
145	"	"	5⅜	"	4.85 "	"
319	"	"	4½	"	4.05 "	"
359	"	8½x11	—3¼	"	3.30 "	"
291	"	"	4	"	3.30 "	"
581	"	"	5	"	4.05 "	"
502	"	"	6	"	4.85 "	"
221	"	8x13	—4½	"	4.00 "	"
76	"	"	5½	"	4.85 "	"
23	"	"	6⅝	"	5.80 "	"
19	"	8½x13	—3⅞	"	4.00 "	"
204	"	"	4¾	"	4.00 "	"
204	"	"	5⅞	"	4.85 "	"
90	"	"	7⅛	"	5.80 "	"

His regular discount to the state is 50%, but he offers this lot at a special discount of 50, 5, 25 and 3%. List the net price per ream opposite each item, extend the total net price of each item, and the net price of the entire lot. Show below all figures used in making the computations.

5. Jones and Davis, Geneseo, were awarded a contract for supplying a road-roller to the department of public works, the machine to be delivered at Geneseo and to be equipped with a scarifier; total price, $1,864.00. The Matson Machinery Company, 354 Main Street, Rochester, who had bid $1,700 for the same machine, plus $150 for the scarifier, f.o.b. cars at Buffalo, complain that they did not receive the order. The records show that freight from Buffalo to Geneseo would have cost $38.75.

   Write a letter to the Matson Machinery Company explaining why the order was awarded to Jones and Davis.

6. Assume the following facts:

   The superintendent of the state hospital at Binghamton has requested the department of purchase to buy four iron beds, style no. 301, made by the Smith Manufacturing Company, Geneva, explaining that this company makes beds with a patented corner fastening device which

is very strong, and he wishes to give them a test in use by patients who are occasionally violent, in order to compare their durability with another type of bed now in use. The director of purchase has sent out the usual proposal forms, and not receiving a bid, has issued a perfunctory form letter requesting the Smith Manufacturing Company to submit a bid immediately. He then receives a reply to the effect that the manufacturer does not care to bid on so small a number of beds. Investigation develops that no dealer in or near Binghamton carries the Smith Manufacturing Company's goods.

Write a letter to the Smith Manufacturing Company explaining why their bid is desired, and suggest some good reasons why they should submit one.

7. If you were about to purchase an item previously handled by your office at infrequent intervals, and you were not familiar with the current market prices, what steps would you take to determine whether the lowest bidder had offered a fair price? Illustrate by any material with which you are familiar.
8. Assuming that a small quantity of one of the following materials is required immediately, and there is not sufficient time to have samples offered by different suppliers tested by technical advisers, what simple inspection and tests could you make, using only the limited equipment likely to be in a purchasing office? Answer for *one* only.
   (a) Wooden handled shovels.
   (b) Muslin.
   (c) Heavy china plates.
   (d) Wrapping paper.
9. Write specifications for any one of the following items, supplying all necessary details so that bidders will know what is wanted without seeing a sample or asking for more information. Answer for *one* only.
   (a) 1,000 yards of cloth.
   (b) 25 cases of canned foodstuffs.
   (c) 1,000 feet of iron or steel pipe.
   (d) A list of six different kinds of drugs, chemicals, or toilet preparations.
10. State for each of the following items whether you would purchase from local dealers, or advertise for sealed bids and make a special effort to secure bids from the principal manufacturers. *State your reasons in each case,* assuming that there are no specific laws or regulations on the subject and that the department is governed only by good business reasons. Answer for *all four.*
    (a) 50,000 barrels of cement for the department of highways, for delivery at five freight stations in Long Island, part needed im-

mediately and the entire lot within four months. Assume that the contract cannot be divided.

(b) Two cases of scouring soap for use in the capitol at Albany. Needed immediately.

(c) 15,000 yards of cloth for uniforms for the inmates of the state reformatory at Elmira. Needed within three months.

(d) Twelve 20-ft. lengths of galvanized wrought iron pipe, ¾-inch diameter, for the game warden's station at Plattsburgh. Needed in thirty days.

11. Describe a good and simple system for keeping records of the names and addresses of suppliers of the various kinds of materials purchased by your office.

12. Describe the usual routine procedure from the time an order is placed until the invoice is paid.

APPENDIX D

SALARY DATA AND JOB SPECIFICATIONS

1. Titles, Positions and Salaries of Staff of Purchasing and Stores Department, County of Los Angeles, California, for Fiscal Year 1927-1928.

Excerpt from Salary Ordinance No. 1482, new series, adopted by board of supervisors of Los Angeles for fiscal year 1927-1928. Group A is salary for first year of service; group B, for second year; group C, thereafter.

Section 32, Purchasing and Stores Department

Item No.		*Title of Position*	*Group A*	*Group B*	*Group C*
1	1	Purchasing Agent and Manager of Stores, per annum	$5400	$5400	$5400
		PURCHASING DIVISION			
2	1	Chief Assistant Purchasing Agent	225	250	275
3	1	Assistant Purchasing Agent and Meat Inspector	225	225	225
4	4	Assistant Purchasing Agents	200	210	225
5	1	Comptometer Operator Clerk	130	135	140
6	2	Typist-Clerks	130	135	140
7	1	Stenographer	130	135	140
8	2	Assistant Typist-Clerks	115	120	125
9	1	Assistant Stenographer	115	120	125
10	1	File Clerk	115	120	125
11	1	Messenger	75	80	85
12	1	Junior Typist-Clerk, as needed, per day	4.00	4.00	4.00
		STORES DIVISION			
13	1	General Storekeeper	225	235	250
14	1	Standardization Clerk	165	170	175
15	1	Bookkeeper	165	170	175
16	1	Junior Bookkeeper	130	135	140
17	4	Stock Record Clerks	150	155	160
18	1	Follow-up Clerk	145	150	155

Item No.		Title of Position	Group A	Group B	Group C
19	2	Billing Machine Clerks	130	135	140
20	1	Requisition Clerk	130	135	140
21	1	Calculating Machine Operator Clerk	130	135	140
22	1	Clerk	130	135	140
23	1	Assistant Typist-Clerk, Addressograph and Graphotype Operator	115	120	125
24	3	Assistant Stenographers	115	120	125
25	1	File Clerk	115	120	125
26	1	Telephone Operator Clerk	115	120	125
27	1	Messenger (male)	75	80	85
28	2	Central Storekeepers	175	180	185
29	1	Receiving Clerk	163	170	175
30	1	Shipping Clerk	145	150	155
31	7	Storekeepers	145	150	155
32	3	Storekeepers (female)	105	110	115
33	10	Assistant Storekeepers	125	130	135
34	3	Assistant Storekeepers (female)	85	90	95
35	5	Assistant Storekeepers	115	120	125
36	1	Assistant Storekeeper (female)	75	80	85
37	2	Truck Drivers	140	140	140
38	2	Truck Drivers (in addition to their monthly salary, persons employed under Item 38 shall receive two cents ($.02) for each delivery made)	130	130	130
39	2	Assistant Calculating Machine Operator Clerks, as needed, per day	5.00	5.00	5.00
40	2	Assistant Typist-Clerks, as needed, per day	5.00	5.00	5.00
41	5	Storekeepers, as needed, per day	5.00	5.00	5.00
42	2	Skilled Laborers, per day	4.50	4.50	4.50
43	4	Laborers, per day	3.50	3.50	3.50
		MULTIGRAPH DIVISION			
44	1	Multigraph Operator	130	135	140
45	2	Multigraph Operators	115	120	125
46	1	Addressograph Operator	115	120	125

2. 1927 Budget of Department of Purchases and Supplies, City of Detroit.

SALARIES

Position	*Salary per Annum*
Commissioner	$10,000.00
Secretary, Purchases and Supplies	5,000.00
Purchases and Supplies, Chief Clerk	4,500.00
Chief Examiner, Materials and Supplies	4,008.00
Examiner, Materials and Supplies (Chemist)	3,000.00
Examiner, Materials and Supplies	2,880.00
Examiner, Materials and Supplies (Engineer)	2,580.00
Senior Accountant	3,480.00
Principal Order Shipment Clerk (2) ($3,000 each)	6,000.00
Senior Buyer	3,120.00
Senior Buyer (3) ($3,000 each)	9,000.00
Principal Clerk	2,880.00
Senior Clerk	2,500.00
Purchase Order Tracer	2,160.00
Purchase Order Tracer	2,220.00
Purchase Order Tracer	1,860.00
Purchase Order Tracer	2,340.00
Senior Stenographer	1,800.00
Junior Clerk	1,800.00
Junior Stenographer	1,584.00
Junior Stenographer	1,800.00
Junior Stenographer	1,575.00
Junior Clerk	1,800.00
Junior Clerk	1,920.00
Junior Clerk	1,680.00
Junior Purchases and Supplies Bookkeeper	1,740.00
Junior Typist (2) ($1,680 each)	3,360.00
Telephone Operator	1,584.00
Messenger	1,140.00
OVERHEAD EXPENSES	
Supplies and Postage	5,000.00
Research and Investigation	1,000.00
Private Car Rental	600.00
Auto Maintenance	1,036.00
Total	$96,947.00

3. List of Employees and Title and Function of Each, State Purchasing Department of California.

1. State purchasing agent. General executive of all activities, final determining source on all questions of policy, and arbiter on questions of purchases.

2. Chief assistant purchasing agent. Assistant to the head of the office and buyer of office supplies and equipment, printing and bookbinding supplies, household furniture, draperies, floor coverings, janitor supplies, and school supplies.

3. Assistant purchasing agent. Buyer of clothing, fabrics, leather and shoe findings, dry goods, and dry goods sundries, drugs, chemicals, pharmaceutical goods, laboratory supplies and equipment, surgical goods and implements, photographic supplies, hospital sundries, etc.

4. Assistant purchasing agent. Buyer of building materials, lumber, hardware, lime, cement, brick, small tools, implements for construction, paints, oils, heavy hardware, heavy machinery, farm implements and equipment, automotive equipment and supplies, electrical motors and equipment, and all kindred materials.

5. Assistant purchasing agent. Buyer of all sorts of materials used on the wharves, and waterfront of about 16 miles, belt railroad of 20 miles, dredges and usual activities of a harbor of the magnitude of the San Francisco harbor. Also attends to rush purchases on San Francisco markets and has charge of the stores of the department.

6. Secretary to the purchasing agent. Assists the purchasing agent in purchasing all food and forage supplies, has supervision of allocation of requisitions, drawing of contracts, and other secretarial work.

7. Assistant to the buyer of building material, hardware, implements, etc. Also handles kitchen equipment, and general household crockery and household supplies.

8. Assistant purchasing agent located at branch office at Los Angeles, having charge of purchases for institutions made in that market; also of office supply store at that place for use of departments of state service located in that city.

CLERICAL STAFF

In the branch office and stores in San Francisco:

2 clerks
1 stenographer
1 porter

In the stores in the capitol building, Sacramento:

1 storekeeper
1 clerk
1 stenographer
1 porter

In the main office in Sacramento:

7 stenographers
1 file clerk
1 tabulation clerk

In the Los Angeles office:

1 stenographer

APPENDIX E

STANDARDIZATION PROCEDURE

Report to Governor Alfred E. Smith, on Work of New York State Bureau of Standards During its First Year of Operation, July 1, 1922, to June 30, 1923.

The following is a brief outline of what has been done toward standardization and simplification of supplies consumed by the departments and institutions of the state since July 1, 1922, when the bureau of standards of the board of estimate and control came into existence.

1. *Work Accomplished:*

(a) Standard specifications for some one hundred-eighty (180) individual items have been prepared and transmitted to the superintendent of purchase for his use in soliciting bids.

(b) Specifications for over seventy-five (75) commodities have been reviewed and in some instances revised for temporary use pending the adoption of standards.

(c) Data relative to the inspection of deliveries of the materials specified have been issued to the institutions, together with such information in regard to the characteristics of the materials and practices of the trade as would be helpful.

2. *Results Obtained:*

The use of standard specifications has largely eliminated the difficulties so often attendant on government purchasing. Several factors have contributed to this result:

(a) Competition has been materially broadened and in some instances dealers and manufacturers have been attracted who previously had no interest in the state's requirements.

(b) A clear statement of the kinds and grades of commodities desired has made for better understanding on the part of the bidders and has resulted in greater uniformity of bids.

(c) Inspection of deliveries has been facilitated by the elimination of unnecessary grades and kinds of supplies and the specifications have provided definite standards by which deliveries can be secured.

(d) In general a normal and healthy interest has been created in the

trade which is reflected both in the prices obtained by the superintendent of purchase and in the quality of the supplies received.

The information which has been issued to the institutions includes definitions of the terms used in the standard specifications and has made for a more uniform understanding on the part of the stewards of the qualities to be expected in the standard commodities adopted.

3. *Policy and Procedure:*

It has been the policy in establishing standards and standard specifications to confine those standards, so far as practicable, to strictly commercial products available from a number of sources, and to express the specifications in terms which will not impose needless and costly limitations on the manufacturers.

In the preparation of a specification the actual use to which the commodity is put is first ascertained, and this information, together with samples or descriptions of the various market grades available, is referred to a committee composed of representatives of the departments and institutional groups directly interested in the commodity. Based on the recommendations of this committee, a tentative specification is prepared and submitted to the trade for suggestions and criticisms, after which the final form is drawn. In this manner both the manufacturer and consumer have an opportunity to point out impracticable stipulations which so often creep into purchase specifications.

The Bureau has established contact with trade associations and with the various departments of the federal government and many valuable suggestions and much pertinent information has been obtained through these sources. Considerable aid has been furnished also by the departments of our own state.

4. *Standard Specifications in Operation:*

Standard specifications which have been officially adopted and are now operative are indicated below by groups.

Class 1.—*Food*

Group 1—Staple foods and groceries	10 items
Group 6—Canned fruits	14 items
Group 8—Canned vegetables	11 items
Group 9—Meats and provisions	38 items
Group 11—Canned fish	1 item
Group 12—Coffee	1 item
Group 13—Salt	4 items

Class II.—*Lights, Fuels, Oils and Greases*

Group 51—Electric lamps	1 item

Class III.—*Clothing*
Group 101—Footwear (not rubber) ..... 9 items

Class IV.—*Furniture, Fixtures, Household Supplies*
Group 151—Soaps and cleaners ..... 12 items
Group 153—Cottons, cloth, etc. ..... 18 items
Group 158—Chinaware ..... 29 items
Group 162—Table flatware ..... 9 items

Class V.—*Leather Goods and Packings*
Group 200—Leather ..... 8 items

Class VI.—*Rubber Goods*
Group 251—Garden hose ..... 1 item
Group 254—Rubber footwear ..... 8 items
Group 255—Rubber sheeting ..... 1 item

Class VIII.—*Paper*
Group 352—Carbon paper ..... 3 items

Class IX.—*Office Supplies*
Group 400—Typewriter ribbons ..... 1 item

Class X.—*Paints and Painters' Supplies*
Group 450—White lead and oils ..... 4 items

Class XII.—*Farm Supplies*
Group 601—Fertilizers ..... 10 items

Total .....184 items

5. *Examples of Results Obtained from the Use of Standard Specifications:*

(a) *Table Flatware.* This is an instance where broader competition was invited by changing the specification to include an article common to the trade.

The specification under which knives, forks and spoons for inmates' use were purchased for several years required a nickel content of 25%. In the establishment of standards in these items it was learned that 25% nickel ware was made by only one factory while an 18% nickel composition was common to all manufacturers of nickel flatware. It was claimed that the 25% product had less tendency to tarnish than the 18% ware, but it was the consensus of opinion among the manufacturers and consumers interviewed in regard to the matter that this factor did not justify the large price differential. Consequently the specification was written to include the 18% nickel ware and this ware has given complete satisfaction in service.

The comparative prices are as follows:

	Old Specification	*New Specification*
Knives	$ 3.37	$ 2.10
Forks	2.53	1.44
Tablespoons	2.53	1.44
Teaspoons	1.27	.72

It is of especial interest to note that the knives supplied under the new specification are of the same grade and manufacture as those supplied under the old; a 37% decrease in price was effected by broader competition.

(b) *Soaps and Cleaners.* The savings effected in these commodities are largely due to a reduction in the varieties purchased, although the prices of several items were influenced directly by specifications.

A survey indicated that more than seventy-five different kinds and brands of soaps and cleaning materials were in use in the institutions and departments of the state. The uses of these materials were determined and specifications were prepared for a range of soaps adequate to most general needs. A change in the cleaning agents used was recommended in several instances and other materials were eliminated entirely. The selected standards consist of ten types of cleaners and the following tabulation shows the relative costs.

Material	*Approximate Annual Requirement*	*Unit Price 1921-22*	*Unit Price 1923-24*	*Total Saving*
Toilet soap	54,000 lbs.	$ .12	$ .0958	$ 1,307
Laundry soap	198,000 lbs.	.06	.0445	3,069
Soap chips	174,000 lbs.	.08	.0878	1,357
Soap powder	65,000 lbs.	.074	.0334	2,639
Soda ash	125,000 lbs.	.046	.0175	3,563
Laundry soda	370,000 lbs.	.033	.0164	6,142
Scouring powder	61,000 lbs.	.064	.022	2,562
Liquid soap	1,100 gals.	.90	.30	660
Grit scouring soap	67,000 cakes	No prices	.0297	
Hand grit soap	4,300 cakes	obtained	.10	
Annual saving (a reduction of 31%)				$18,585

(c) *Fertilizers.* In this case there was considerable dissatisfaction in the trade with the specifications previously used. It was pointed out that the penalties imposed for discrepancies in the chemical content of deliveries were disproportionate and not in accordance with trade practices. The specifications were revised and proportionate penalties were stipulated. Arrangements were made also for prompt inspection of deliveries and the specifications as finally issued attracted keen competition. Actual comparative prices are not available due to the fact that in 1921-1922 fertilizing chemicals were purchased and mixed at the respective institutions, but the state department of farms and markets advised that the prices obtained under contract were considerably lower than those paid by the various farmers' cooperative associations in the state.

Details of the results obtained in other commodities are available should the board desire to review them.

Respectfully submitted,
(Signed) W. B. Folger,
Director, Bureau of Standards

APPENDIX F

GENERAL CONDITIONS, INSTRUCTIONS AND INFORMATION FOR BIDDERS ON FORMAL PURCHASES, SAN FRANCISCO

PROPOSALS

1. The Purchaser of Supplies will furnish blanks for all proposals, and no bids will receive consideration unless made upon blanks so furnished.

2. All proposals shall be accompanied by a certified check or a certificate of deposit on a solvent bank in the City and County of San Francisco of 5 per cent of the amount of the bid, payable at sight to the order of the Purchaser of Supplies. The amount of the bid is the aggregate cost of the estimated quantity required of all the articles bid upon. If the bidder to whom the contract is awarded shall for ten days after such award fail or neglect to enter into the contract and file the required bond, the Purchaser of Supplies shall draw the money due on such certificate of deposit or check and pay the same into the treasury; and under no circumstances shall the certificate of deposit or certified check be returned to such defaulting bidder.

3. All bids with alterations or erasures therein shall be rejected. When specifications do not include alternative proposals, statements or communications accompanying bids, which serve to qualify such bids, shall not be considered in making awards.

4. The estimated quantities required, as given in this proposal, are the estimated requirements for the contract term; but it is distinctly understood that these estimates are approximate and given for information only, and that no obligation is imposed thereby upon the City and County of San Francisco to purchase these amounts, the right being reserved to said City and County to purchase under this proposal any greater or less quantity, as the interests of said City and County may require. The estimated quantities required are entered under the column so indicated, and are expressed in terms of the unit printed in the unit column. Example: Should the number printed in the estimated quantities required column be 70, and the unit printed in the unit column be 10 pounds, the total estimated quantity required would be 700 pounds. All articles in this schedule shall be furnished when required, at the contract price, for

the use of any officer, office, bureau, commission, board or public institution of the City and County of San Francisco, save and excepting the Public Library.

SAMPLES

5. The use of the name of a manufacturer, or of any special brand or make, in describing any item contained in these Specifications and Proposals, does not restrict bidders to that manufacture or specific article, this means being used simply to indicate the character or quality of the article desired; but the goods on which proposals are submitted must in all cases be equal in every particular to those referred to. The make or grade of the article on which a bid is submitted should be stated in the bid in every instance; when not stated, it will be understood to be the specific article named in the proposal. Where the trade name or number of an article appears in the specifications, it is intended to indicate the quality desired. Where the bidder quotes a price on the exact article specified, a sample of the article will not be required unless specifically requested. If, however, the bid submitted is on any other brand or make than that stated in the specifications, a sample of the kind upon which proposal is made must be furnished, in order that the bid may be considered.

6. Articles in this schedule described as "City sample" must fully conform thereto in every particular; said "City samples" may be inspected at the office of the Purchaser of Supplies, unless otherwise stated.

7. Samples must be furnished as required by the schedule. Accepted samples will be retained by the Purchaser of Supplies during the life of the contracts, if considered necessary. In any case, the right is reserved to retain any samples submitted with proposals whenever it may be considered necessary to do so for the purpose of testing, and allowance will be made for such samples.

8. Each sample so submitted must be plainly marked in durable manner, thus assuring identification of the sample. Such marking shall state: (a) the name of the bidder; (b) the item number in this schedule to which it relates; (c) the date of opening of bids.

9. Samples, to receive consideration, should be in the custody of the Purchaser of Supplies at the time bids are opened.

10. Samples must not be inclosed with proposals, and proposals must not be wrapped in packages with samples.

DELIVERIES

11. Articles shall be delivered without extra charge to the City and County of San Francisco for such delivery, except when otherwise provided in the specifications, to the officers, offices, bureaus, commissions,

departments, boards and public institutions, to such places within the City and County of San Francisco, at such times, in such quantities, and in such manner as the Purchaser of Supplies may from time to time designate upon purchase orders during the contract term.

FORMAL CONTRACTS

12. Before the execution of any contract, the Purchaser of Supplies shall require the successful bidder to file a bond with good and sufficient sureties for the faithful performance of the contract, in a sum not less than twenty-five per cent (25%) of the aggregate award.

13. No contract awarded under this proposal shall be assigned except upon recommendation of the Purchaser of Supplies and with the approval of the Board of Supervisors.

14. The contractor must save, keep, bear harmless, and fully indemnify the City and County of San Francisco and any of its officers or agents from all damages, or claims for damages, costs, or expenses in law or equity that may at any time arise or be set up for any infringement of the patent rights, copyright, or trade-mark of any person or persons in consequence of the use by the City and County of San Francisco, or by any of its officers or agents, of articles to be supplied under this proposal, and of which the contractor is not the patentee or assignee or has not the lawful right to sell the same.

15. No Supervisor and no officer or employee of the City and County, shall be or become, directly or indirectly, interested in, or in the performance of, any contract, work, or business, or in the sale of any article, the expense, price or consideration of which is payable from the treasury.

INSPECTION

16. All articles supplied shall be subject to inspection and rejection by the Purchaser of Supplies or any department official or subordinate charged with such duty, or by both.

17. No article or articles specified herein shall have been made in a prison.

RESERVATIONS

18. Any contractor who fails to live up to the terms of his contract for the delivery of materials, supplies or equipment, may upon the joint action of the head of the department and the Purchaser of Supplies, be declared an irresponsible contractor and shall not, for a period of one year thereafter, be awarded any further contract for furnishing such materials, supplies or equipment to any department of the City, unless the Board of Supervisors shall by a two-thirds vote remove such disqualification.

CATALOGUES AND LISTS

18½. When a bid is based on the prices contained in a catalogue or price list, two copies of such catalogue or price list must be submitted with the proposals. In case an award be made on an item for which a catalogue or price list is submitted, sufficient copies for all municipal departments, identical in every particular with the one accompanying proposal, will be required immediately upon notice of award and bidders are cautioned to be prepared to furnish them promptly. Catalogues and price lists submitted with bids should be of the latest editions.

AWARDS

19. Any bidder may bid separately for any article named.

20. Awards shall only be made to the lowest responsible bidder, quality of the product offered and delivery to be considered; and provided further that if the Purchaser of Supplies believes the public interest would be subserved by accepting other than the lowest bid, the reasons for accepting such higher bid shall be submitted in writing as a part of the award and a copy thereof filed with the Auditor; and provided further that no award shall be made to any bidder, other than the lowest bidder, except in consideration of deliveries or on account of the quality of the article or articles offered, to be determined by such tests as may be required or recommended by the Purchaser of Supplies.

21. The Purchaser of Supplies may, with the approval of the Board of Supervisors, reject any and all bids, or the bid for any one or more articles embraced, when the public interest will be subserved thereby.

OPENING OF BIDS

22. Bidders may inspect the bids after reference to and tabulation by the Bureau of Supplies.

23. Bids should be enclosed in an envelope bearing the superscription: "Proposal for Supplies," sealed and delivered by the bidder to the Clerk of the Supervisors, between the hours of 2 and 3 P. M., on date stated in advertisement. Said bids will be opened by the Board of Supervisors at the hour and place stated in the advertisement for proposals in the presence of all bidders who attend.

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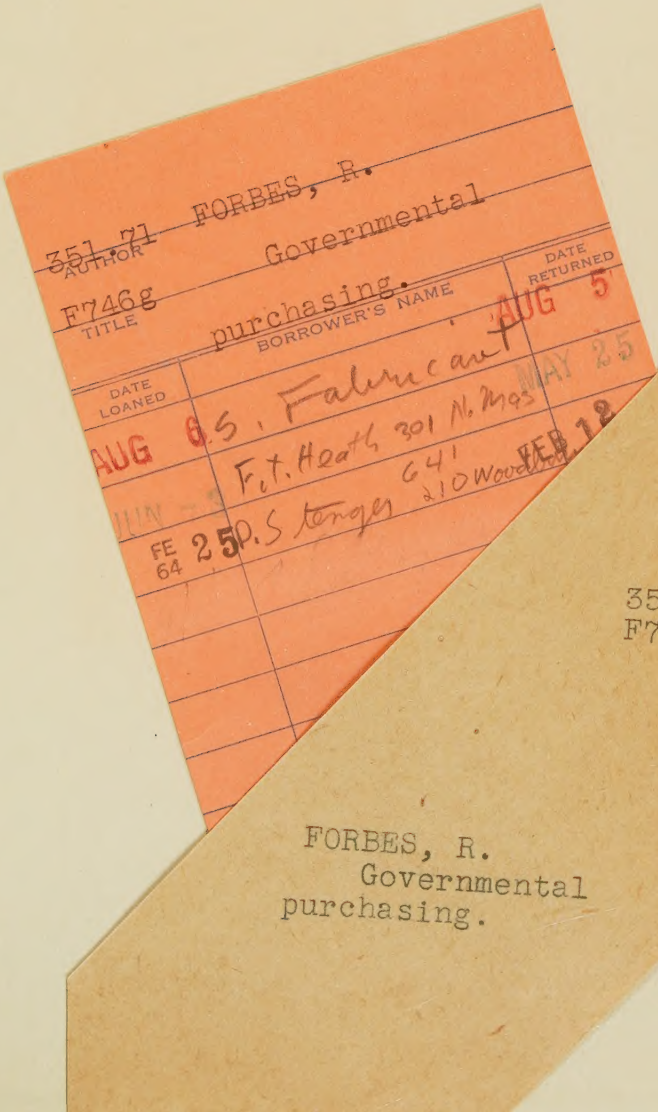
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